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CITY OF ABERDEEN.

REPORT

BY THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1936

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PREFACE.

In accordance with the requirements of the Department of Health for Scotland, there is herewith submitted the Annual Report on the Health and Sanitary Conditions in the City of Aberdeen for the year ended 31st December, 1936.

Population.

Under the Aberdeen Corporation Order Confirmation Act, 1934, powers were obtained to have the boundaries of the City extended. With this extension, the Registrar-General has estimated the population of the City of Aberdeen to the middle of 1936 at 176,897, as compared with 175,373 in 1935. This figure includes the inmates of Woodend Hospital and Oldmill Hospital now within the City area. The statistical rates throughout the Report are based on this figure.

Birth-Rate.

The birth-rate in Aberdeen in 1936 was 17.2 per thousand of population; this was 0.8 lower than that of the previous year. This rate of 17.2 is the lowest yet recorded for the City. The Scottish birth-rate was 17.9.

General Death-Rate.

The general death-rate in Scotland in 1936 was 13.4. In Aberdeen it was 12.7, as compared with 13.5 in 1935 and 12.5 in 1934. This general death-rate of 12.7 in 1936 was the lowest of the four principal towns in Scotland. The general death-rate of Edinburgh was 13.4, of Dundee, 14.2 and of Glasgow, 14.7.

Tuberculosis Death-Rate.

The death-rate from all forms of tuberculosis in Scotland in 1936 was .74 per thousand of population, as compared with .49 in the City of Aberdeen. Within the last ten years, the death-rate in Aberdeen from all tuberculosis has been more than halved.

Tuberculosis has a wide-spread incidence, tends to become chronic in character and is prone to attack young adults, and these factors make it a problem of the utmost public health importance. There has been a progressive fall in the death-rate from all tuberculosis and the fall in lung forms and other forms of tuberculosis is shown graphically in the chart following page 30.

Mention must also be made of the special pneumothorax clinic at the City Hospital which has been in full working order for some time. The results of collapse-therapy in pulmonary tuberculosis have been most satisfactory, and modern surgery of the chest is daily coming into more prominence. Chest surgery is practised both at Woodend Hospital and at the City Hospital.

Attention is drawn to the section of the Report dealing with Tuberculosis Services and especially to those tables which deal with the death-rates in the four principal Scottish towns.

Infantile Mortality.

As regards Aberdeen, the year under review is a record year with an infantile mortality rate of 70. The rate throughout Scotland in 1936 was 82. The graph, incorporated in the Section of this Report dealing with the Maternity and Child Welfare Services, indicates the downward trend of infantile mortality in Aberdeen as compared with all Scotland and the other three principal towns since the second year of civil registration, viz., 1856.

The/

The following comparison is also made of the infant mortality rate in Aberdeen and in the other principal towns:-

Year.	Infant Mortality Rates.			
	Glasgow.	Edinburgh.	Dundee.	Aberdeen.
1890	149	144	208	159
1900	154	135	177	149
1910	121	111	169	111
1920	107	89	131	121
1934	98	62	74	77
1935	98	70	68	91
1936	109	68	82	70

Infectious Diseases.

In 1936, whooping cough showed the highest prevalence, with 767 cases and 25 deaths. As whooping cough is not a compulsorily notifiable disease, this is not an accurate measure of its incidence. Active immunisation with Haemophilus Pertussis vaccine has recently been proved to possess real value in decreasing the severity of the disease and the mortality therefrom.

Scarlet Fever, of a mild variety, continued in epidemic form until April, 1936, when there was a distinct decline. During the period of epidemic prevalence - September, 1933 to April, 1936 - 4,973 cases were notified with 35 deaths. This gives a low case-mortality of 0.7 per cent.

As regards Diphtheria, which was also prevalent, 497 cases were notified in 1936 as against 698 in 1935 and 719 in 1934. In 1936, the case-mortality was 3.4 per cent. as compared with 4.6 in 1935 and 3.5 in 1934.

In 1936, there were only 6 deaths from influenza, and this number includes 2 deaths from influenzal pneumonia, but the severe outbreak of influenza which swept all over the country towards the end of 1936, made its appearance in Aberdeen only in the early weeks of January, 1937. Notifications of pneumonia showed a decrease in 1936 as compared with 1935, there being 503 cases of primary pneumonia with 86 deaths in 1936, as compared with 775 cases and 159 deaths in the preceding year.

Diphtheria Immunisation Campaign.

In August, 1936, the Town Council sanctioned the re-introduction of a campaign in connection with the active immunisation of children against diphtheria. The children immunised included not only school children but also children of the pre-school period. Details of the work done during the year are contained in the body of the Report.

Infective Jaundice.

Further investigations on the subject of Leptospiral Infections were carried out by Dr. John Smith, Regional Bacteriologist, and a valuable contribution in this connection appears in Chapter I.

Rheumatic Diseases.

In the end of January, 1936, three members of the Public Health Committee appointed by the Town Council, together with the Medical Officer of Health, visited the British Red Cross Clinic at Peto Place, London and thereafter the deputation proceeded to Buxton and inspected the Royal Devonshire Hospital there.

In/

In the course of their inspections, the deputation had the benefit of advice from Lord Horder, Chairman of the British Empire Executive Committee for Rheumatic Diseases, from Dr. Copeman, Medical Officer in charge of the Peto Place Clinic, and from Dr. Buckley, Senior Physician to the Royal Devonshire Hospital.

As a result of these inspections and discussions, the visiting members arrived at the following conclusions, viz:-

"(1) Rheumatic diseases are so devastating to the health and working capacity of the community that it is desirable, and indeed necessary, that steps should be taken to provide facilities for their diagnosis and treatment. Ignorance as to the initial symptoms of these diseases often leads to permanent disability.

(2) The delegates are of opinion that, provided accommodation for a Rheumatic Clinic can be obtained, say, in the Royal Infirmary buildings at Woolmanhill, after they have been vacated by the Directors of the Infirmary, the amount required for reconstruction, equipment and running costs does not appear to present any insuperable difficulty to the Local Authority.

(3) Investigations should be continued in order to discover the income that the Local Authority might expect to obtain to cover some part of their financial commitments, e.g. -

(a) Donations from the Red Cross Organisation.
(b) Grants from the Department of Health for Scotland.
(c) Payments by Approved Societies for cost of treatment of patients - as pertains in the British Red Cross Clinic in London.
(d) Payments by private patients for treatment; and
(e) Income from other agencies."

It should be explained that, since the delegates visited the clinics at London and Buxton, a Central Committee has been constituted in London to develop an Empire campaign against rheumatic diseases. It is hoped that, by this means a central fund will be raised which will reach a very substantial sum. The purpose of this fund would be to endow research and thus stimulate the establishment of local rheumatic clinics throughout the country.

The establishment of a rheumatic clinic in Aberdeen has had to be reviewed in view of a proposal that the clinic should be established as an integral part of the new Up-town Baths. This suggestion is meantime under consideration by a special sub-committee of the Public Health Committee.

Venereal Diseases.

Under the auspices of the British Social Hygiene Council, the Chief Venereal Diseases Officer gave a series of lectures, not only in the City of Aberdeen but also in the two adjoining Counties.

Two very interesting lectures were given in Aberdeen under the chairmanship of the Convener of the Public Health Committee. At each of these meetings over 600 persons were present. A short/

short address was given by the Chief Venereal Diseases Officer followed by a "Talkie" film.

The importance of prevention in venereal diseases is so outstanding that propaganda in this direction must be used intensively. In connection with propaganda, it seems proper that the Medical Officer of Health should organise and supervise this department of health work because he is the person who has the measure of the incidence of the disease and of the health requirements of his area. But it cannot be suggested that the Medical Officer of Health should prepare all matter that is intended to be used for publicity purposes. On the other hand, the more he relies on the various experts whose services can be used for this purpose, the better and more perfect the material will be.

Notwithstanding the efforts made and money expended on the Venereal Diseases Scheme, the incidence of these diseases in this area does not appear to be diminishing. During the past ten years, there has been a pronounced increase in the number of new cases dealt with annually at the Aberdeen clinics. This, however, may be more apparent than real. For many years, the numbers treated at the municipal clinics had been considerably less, per thousand of population, than those attending similar clinics in the other large towns in Scotland, though there was no reason to believe that the incidence of venereal disease was less prevalent in Aberdeen than elsewhere. The greater numbers now coming forward for advice and, when necessary, treatment, may be accounted for, partly at least, by two reasons. The first is that there has been a gradually increasing provision of facilities for treatment, not only in the form of increased clinic hours, but also in the giving of greater measures of privacy to patients. The second is that there is now a growing demand by the public for information relating to the venereal infections; such information already being supplied to numerous lay bodies, not only by the British Social Hygiene Council, but also by the Aberdeen Venereal Diseases Scheme, has led to more knowledge of the dangers of these diseases, and a correspondingly greater willingness on the part of those infected to seek help at an early stage.

Of the two main venereal diseases, syphilis is the more easily controlled. One hopeful point is that the early and effective treatment of persons afflicted with syphilis will almost certainly diminish the terminal ailments that accrue if no treatment, or incomplete treatment, is administered. But even more important than the elimination, by treatment, of the late and deadly effects, is the fact that early and adequate treatment quickly reduces infectiousness, thus limiting the disease to the individual. It matters little if one individual dies of syphilis, compared with the possibility of that person, through lack of treatment, infecting either directly or indirectly, a dozen or more individuals, all of whom may suffer dire terminal effects of the disease.

Gonorrhoea presents greater difficulties, but even in this disease, a high percentage of cures can be obtained in early cases, and thus a great diminution can be effected in potential sources of infection, while the far-reaching and crippling complications may be avoided. Chronic cases certainly provide a serious problem, and in them the question of cure may become a matter of grave doubt. Like syphilis, treatment of the early uncomplicated case is the important factor in reducing the incidence of gonorrhoea.

Returning to the question of propaganda, there is little doubt/

doubt but that extensive and intensive dissemination of the elementary points relating to venereal diseases is of paramount importance. Public opinion is now less bigoted than formerly, and there is a distinct trend to the more rational recognition of the fact that venereal diseases do exist and that the problems must be faced squarely; there is every reason to hope and to believe that propaganda cannot fail to do good. Ignorance is a prime factor in the spread of venereal diseases and especially in the development of their after-effects, and warning, by the spread of knowledge throughout a community, is as essential a part of the Public Health Service as is the provision of treatment centres for those already infected.

Health. Exhibition.

In September, 1936, the Public Health Department took part in an Exhibition held in the Music Hall under the auspices of the Aberdeen "Press and Journal". One section dealt with the incidence and prevention of tuberculosis and of the ordinary infectious diseases; another section dealt with the mother and child welfare services. In addition, films dealing with health matters were shown and were highly appreciated. Other Departments of the Corporation took part in the Exhibition.

Child Guidance.

The Aberdeen Child Guidance Clinic has now been in operation for over five years, and a synopsis of the work as detailed by Dr. Norman Walker is given in Chapter I.

Mental Health Services.

In this Report there is included a statement dealing with Mental Health Services as administered at Kingseat Mental Hospital, Newmachar.

School Medical Services.

A Report dealing with the School Medical Services will be issued separately, as the school year ends on 31st July and is, therefore, not coincident with the year as dealt with in this Report.

Structural Additions and Improvements.

The Town Council have undertaken certain structural commitments. They have decided to erect an Ante-natal Annexe associated with the new Maternity Hospital at Foresterhill. The plans have now been approved by the Department of Health for Scotland.

Plans for the Staff Home at Woodend Hospital have also been prepared, and it is hoped that work on this building will be commenced at an early date.

Endeavours have also been made to arrange for the speedy erection of a Cubicle Isolation Ward at the City Hospital. Delay has been experienced because the only site available for this purpose is that at present occupied by a row of houses adjacent to the hospital grounds, and great difficulty will be experienced in obtaining alternative accommodation for the sitting tenants. The majority of the houses referred to belong to the Town Council.

During the year, the "Animal House" at the City Hospital has been completed. It is a well-constructed building and serves splendidly/

splendidly the purpose for which it has been erected. Considerable extension to the City Hospital Laundry has been carried out, and modern equipment has been installed to take the place of some of the out-of-date machinery.

It is my pleasant duty to put on record an appreciation of the work performed by the members of the various branches of the Public Health Department.

HARRY J. RAE.

Medical Officer of Health.

June, 1937.

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CITY OF ABERDEEN.

REPORT BY THE MEDICAL OFFICER OF HEALTH
For the Year 1936.

CHAPTER I.

SPECIAL INVESTIGATION AND REPORT.

I. WEIL'S DISEASE (Leptospirosis)

During the year, Dr. John Smith, Regional Bacteriologist, continued his investigation with regard to leptospiral infections, and a further important contribution entitled "Vaccination of Guinea-pigs and Human Beings against Leptospiral Infections" is herewith appended.

During the past few years, increasing evidence has been obtained of the presence, in this country, of leptospiral infections associated particularly with operatives employed as miners (Buchanan, 1927; Swan & McKeon, 1935), sewer workers (Fairley, 1934; Alston, 1935; Alston & Brown, 1935), and fish workers (Davidson et al. 1934; Davidson & Smith, 1936; Smith & Davidson, 1936). With a view to minimizing the risks of contracting infection, it seemed feasible, therefore, that in circumstances where it is wellnigh impossible to eradicate the vectors of the disease, other methods such as active immunization of the workers might be practised. Such environmental conditions as exist in sewers and mines might make attempts at rat extermination valueless, whereas in the fish trade, with the expenditure of a little care and forethought, the factors which permit of infection could, it is believed, be entirely abolished.

It appeared important, therefore, to review the previous work on immunization of animals and man against infection with Leptospira icterohaemorrhagiae, and to re-study the problem particularly as regards the production of sufficient antibodies to give complete protection. Successful active immunization against leptospiral infections was first demonstrated by Ido et al. (1916). These workers immunized guinea-pigs with emulsions made from the livers of infected animals in which the leptospira were killed by 0.5 per cent. phenol. Noguchi (1918) later showed that three injections of 0.5 c.c. of killed leptospiral cultures made guinea-pigs completely resistant to both homologous and heterologous strains. When smaller quantities were given, the immunity established was often only sufficient to protect the animals against the homologous strain, and not against heterologous types. Active immunity was found to persist for at least eight weeks. Again, Berger (1923) successfully immunized guinea-pigs with leptospiral cultures, killed by treating them with copper foil. Following upon the guinea-pig experiments of Ido et al., Ito & Matsuzaki (1916) immunized miners with killed cultures, and claimed satisfactory protection results. This method was employed by further Japanese workers, and Inado (1922) reported on the results obtained by Wani in immunizing 10,368 miners with a killed vaccine containing 30-75 million leptospira per c.c., and giving a dose of 1 c.c., followed by another of 2 c.c. Among the vaccinated miners the resulting morbidity rate was reduced to 0.12 per cent., or less than one-ninth of that occurring amongst the unvaccinated. Baermann & Zuelzer (1928) used a single dose of 5 c.c. of vaccine, or two doses of 1 and 2 c.c. at 5-8 day intervals. The vaccine was killed by heating to 65° C., and preserved with 0.5 per cent. phenol. He immunised eighty men.

With a view to minimising the losses which occur amongst dogs due to "yellows" - a leptospiral infection - Dalling & O'Kell (1926) vaccinated these animals with infected guinea-pig liver emulsion killed by 0.5 per cent./

cent. phenol. The vaccinated animals were then inoculated with virulent L. icterohaemorrhagiae, and were found to be immune. Vaccination of dogs with killed cultures is now practised, and the procedure has also been used to control a similar disease which occurs, frequently in epidemic form, in fox-farms (Dunkin & Laidlaw, 1926).

VACCINATION EXPERIMENTS in GUINEA-PIGS.

Methods.

The medium used for culturing the leptospira for the preparation of vaccines was that employed by Prof. Schüffner. The details of the preparation of this simple medium are as follows: To 1500 c.c. tap water add 1.5 g. Witte peptone; boil; add 300 c.c. Ringer's solution and 150 c.c. Sørensen buffer mixture, pH7.2 ($\underline{M}/15$ Na_2HPO_4 72 c.c. $\underline{M}/15$ KH_2PO_4 100 c.c.); boil until precipitation is complete; place in ice chest to cool; filter; check pH; place 3 c.c. in clean, new test tubes; autoclave for 20 min.; add 0.3 c.c. fresh sterile rabbit serum; heat at 56° C. for $\frac{1}{2}$ hour; incubate at 37° C. overnight for sterility.

The rabbit's blood was collected from dilated ear veins, after making an incision by means of a scalpel, an electric light being kept close to the ear to maintain local heat. By this means 40 c.c. of blood could be collected with ease from large rabbits of the Belgian hare type. After the blood was collected, a few cubic centimetres of tap water were added to cause a certain amount of haemolysis, as the presence of haemoglobin in the serum tends to favour good growth. After clotting, the blood was centrifuged, and the serum sterilized by passing it through sterile Chamberland L5 candles. The serum could then be stored in the refrigerator for considerable periods without any apparent deterioration in its growth-supporting properties. It should also be noted that certain rabbit sera are not satisfactory, but a simple test of the serum by means of Schüffner's sero-reaction will eliminate those specimens which are likely to cause lysis of the leptospira and thus prevent growth.

The various strains of leptospira were cultured in tubes containing 3 c.c. of the medium and incubated for 4 days at 30° C., and thereafter used for vaccination, in the case of non-virulent strains in the living state, and in the case of virulent strains after being killed by heat or chemical agents. The various types of vaccine employed are detailed in Tables I and II, and need no further explanation. The relative density of the organisms in the culture medium appeared to be approximately similar. The virulence of a strain was maintained by passage through guinea-pigs and then recovered by culture.

In guinea-pig experiments it was found essential to use young animals, otherwise the results were irregular, since old animals frequently acquire a certain amount of immunity and survive inoculation with a virulent strain. Therefore,, in all the following experiments, animals 6 weeks old at the commencement of the experiment were employed.

The method adopted in prophylactic vaccination was to give two doses of 1 c.c. of the vaccine subcutaneously at an interval of a week. After a further period of 2 weeks, each guinea-pig was given a subcutaneous injection of 0.2 c.c. of 4-day-old virulent culture. The control series of animals for each immunizing experiment was set aside from the same batch of animals as those which were vaccinated, and the control animals received a similar dose of the same virulent culture as employed on the vaccinated animals.

Results.

In the first series of experiments, certain animals were vaccinated with

a living non-virulent strain of L. icterohaemorrhagiae Weil and with killed vaccine. prepared from a typical virulent strain recently isolated from a human case. In the second series of experiments, the guinea-pigs were vaccinated with vaccines prepared from L. canicola, L. icterohaemorrhagiae Rachmat (Indian strain), L. hebdomadis, and, for interest, L. biflexa. The first two strains were obtained through the kindness of Prof. Schüffner, and the third and fourth from the National Collection of Type Cultures at the Lister Institute.

Vaccination with Strains of L. Icterohaemorrhagiae Weil. (Table I)

(1) Vaccination with living non-virulent cultures (Exps. 1, 2). In these experiments a total of thirty-six animals were vaccinated with two doses of 1 c.c. of a non-virulent culture of L. icterohaemorrhagiae, and eighteen animals were retained as controls. Four animals in the vaccinated series died of a Salmonella infection before the living virulent culture was administered. The result was clear-cut since all the immunized animals survived, while all the non-vaccinated died of a characteristic leptospiral infection.

(2) Immunization with heat-killed cultures (Exp. 3) In this experiment virulent cultures were killed by heating at 55° C. for 30 min. Six animals were treated, and six were used as controls. Inoculation with virulent cultures showed the vaccinated to be completely immune and the non-vaccinated to be all susceptible to infection.

(3) Immunization with virulent cultures killed by chemical agents (Exps. 4, 5, 6, 7). For these experiments cultures were treated with 0.5 per cent. phenol, 0.5 per cent. formalin, and 0.5 per cent. dettol, and set aside for 48 hours, when microscopic and cultural examination failed to show the presence of any living forms. Six animals were vaccinated with the phenolized culture, twelve with the formalinized, and six with the dettolized. Here again the results were entirely satisfactory since all vaccinated animals showed complete protection, while the control animals, with two exceptions, all died of a typical leptospiral infection.

TABLE I. Vaccination with L. Icterohaemorrhagiae Weil.

xp. o.	Type of Vaccine.	First vaccinated series.				First control series.			
		No. of guinea-pigs.	No. dying of inter-current disease	No. surviving virulent culture	No. dying of leptospirosis	No. of guinea-pigs.	No. dying of inter-current disease	No. dying of leptospirosis	No. surviving
	Living non-virulent.	6	0	6	0	6	0	6	0
	Living non-virulent	30	4	26	0	12	0	12	0
	Virulent culture killed at 55°C. for 30 min.	6	0	6	0	6	0	6	0
	Virulent culture killed 0.5% phenol	6	0	6	0	6	0	6	0
	Virulent culture killed 0.5% formalin	6	0	6	0	6	0	6	0
	Virulent culture killed 0.5% formalin	6	0	6	0	6	0	4	2
7	Virulent culture killed 0.5% dettol	6	0	6	0	6	0	6	0

Vaccination with Heterologous Strains (Table II)

It has been shown by various workers that strains of leptospira isolated from patients and animals in different parts of the world differ in their serological characteristics (Fletcher, 1928; Taylor & Goyle, 1931; Hindle, 1931; Ruys & Schüffner, 1935). Thus L. canicola has been recovered from dogs and human patients by Schüffner, who has shown by agglutination and agglutinin absorption tests that this organism differs from L. icterohaemorrhagiae Weil. Similarly, Indian, Sumatran and Japanese strains have also been found to differ from the true Weil strain. Thus for this series of experiments cultures of L. canicola (dog) L. icterohaemorrhagiae Rachmat (Indian strain), L. hebdomadis (Japanese strain), and L. biflexa (saprophytic type) were employed. All these strains were apparently non-virulent for guinea-pigs even when living cultures were injected in 1 c.c. amounts (Table II).

TABLE II. Vaccination with heterologous strains of Leptospira.

xp. o.	Type of Vaccine.	Second Vaccinated Series.				Second Control Series.			
		No. of guinea-pigs.	No. dying of intercurrent disease	No. surviving virulent culture	No. dying of leptospirosis	No. of guinea-pigs.	No. dying of intercurrent disease	No. dying of leptospirosis	No. surviving
8	L. canicola living	6	0	6	0	6	0	5	1
9	L. canicola killed 0.5% formalin	6	1	5	0	6	0	6	0
0	L. icterohaemorrhagiae Rachmat living	6	0	5	1	6	0	5	1
1	L. icterohaemorrhagiae Rachmat living	10	2	7	1	6	0	6	0
2	L. hebdomadis living	10	1	6	3	6	0	6	0
13	L. biflexa	10	0	0	10	6	0	5	1

(4) Vaccination with L. canicola. In Exps. 8 and 9 L. canicola was employed in the form of a living vaccine, and also as vaccine killed by 0.5 per cent. formalin, each vaccine being used to vaccinate six animals. Eleven surviving animals all appeared to be resistant to infection with the virulent form of L. icterohaemorrhagiae, whereas eleven out of the twelve control animals died.

(5) Vaccination with the Indian strain L. icterohaemorrhagiae Rachmat. In Exps. 10 and 11, sixteen guinea-pigs were vaccinated with living non-virulent cultures of the Indian strain. Two animals died in the course of vaccination, two died of a leptospiral infection, and twelve survived the test dose of virulent culture of L. icterohaemorrhagiae, whereas eleven out of twelve control animals died.

(6) Vaccination with the Japanese strain L. Hebdomadis. In Exp. 12, ten guinea-pigs were vaccinated with living non-virulent cultures of L. hebdomadis, and six animals were retained as controls. One of the vaccinated group died before immunization was completed, and when the remaining nine were inoculated with a virulent culture of L. icterohaemorrhagiae six animals survived and three died of typical leptospirosis. In the control series all died of infection.

(7)/

(7) Vaccination with the saprophytic strain L. biflexa (Exp. 13). Ten guinea-pigs received two doses of vaccine, but when inoculated with virulent L. icterohaemorrhagiae all succumbed to infection, while in the control series for this experiment five out of six animals died. Vaccination with L. biflexa failed then, to give any demonstrable protection against L. icterohaemorrhagiae.

Comment.

It is obvious from the above experiments that a solid immunity can be developed when guinea-pigs are vaccinated with living non-virulent strains, or killed emulsions of virulent strains of L. icterohaemorrhagiae. Further, similar results can be obtained with certain leptospiral strains which differ serologically from L. icterohaemorrhagiae Weil. Thus, vaccination with L. canicola produced effective protection against L. icterohaemorrhagiae Weil, whereas, when vaccines of L. icterohaemorrhagiae Rachmat and L. hebdomadis were employed, the results were not so satisfactory, as three out of nine vaccinated animals died of typical leptospirosis.

Production of Immune Bodies as a Result of Vaccination.

It has been shown repeatedly that as a result of infection with L. icterohaemorrhagiae, immune bodies demonstrable as agglutinins, lysins, and complement-fixing bodies appear rapidly after convalescence has been established, and a similar result must be produced by vaccination. In analogy with other bacterial infections it is presumed that the leptospiral agglutinins are not true indicators of immunity, but the demonstration of the lytic titre of a serum by Schüffner's sero-reaction may indicate the true immune properties. On the other hand, when the microscopic serological test is carried out, it is found that the lytic titre of a serum for living cultures is practically identical with the agglutinin titre for killed formalinized cultures. A series of guinea-pigs were inoculated with, in one instance, living non-virulent cultures, and in the other instance, phenolized cultures of a virulent strain, and two weeks after the second injection blood samples were obtained and tested. The results are detailed in Table III. They show that the lytic titres in the series inoculated with the living strains were definitely higher than in the animals treated with the phenolized vaccine. The titres in both series ranged from 1/6 to 1/30, but this was apparently sufficiently high to give protection against a subsequent injection of 0.2 c.c. of virulent culture.

TABLE III. Production of Immune Bodies in Vaccinated Guinea-pigs.

Type of Vaccine.	Exp. No.	Guinea-pig No.	Titre.	Result of Inoculation with 0.2 c.c. of virulent culture.
Two doses of 1 c.c, non-virulent L. icterohaemorrhagiae.	14	1	1/10	Survived.
		2	1/100	"
		3	1/30	"
		4	1/100	"
		5	1/30	"
		6	1/30	"
		7	1/10	"
		8	1/10	"
		9	1/30	"
		10	1/30	"
Two doses of 1 c.c. of o.5% phenolized culture.	15	1	1/10	Survived
		2	1/6	"
		3	1/10	"
		4	1/10	"
		5	1/6	"
		6	1/6	"
		7	1/10	"
		8	1/10	"
		9	1/10	"
		10	1/6	"

Carrier Conditions in Guinea-pigs Following upon Vaccination.

It is known that 20-30 per cent. of rats in this country harbour L. icterohaemorrhagiae in their kidneys without any harmful effects. It was thought that the foregoing experiments, in which the animals were vaccinated and then treated with virulent cultures, might produce similar conditions in guinea-pigs. So sixteen days after the vaccinated animals had been treated with virulent cultures and survived, they were killed, their kidneys were removed, emulsified in saline, and inoculated in groups into pairs of young animals (Table IV). Thus the kidneys from thirty-two surviving animals in Exps. 1 and 2 were divided into seven groups (three of four pairs and four of five pairs), and inoculated into seven pairs of guinea-pigs. Among thirty-two animals inoculated with living non-virulent L. icterohaemorrhagiae and six with living non-virulent L. canicola, no carriers were detected. In Exps. 3, 4, 5, 6 and 7, where animals were treated with heat-killed, phenolized, formalinized, and dettolized vaccine of L. icterohaemorrhagiae, carriers of virulent leptospira were demonstrated amongst the animals protected by means of the formalinized and dettolized emulsions. Again, in Exp. 9 formalinized emulsion of L. canicola was used, and in Exps. 10 and 11, where the living form of L. icterohaemorrhagiae Rachmat was employed, further evidence of carrier conditions was obtained in both series. The foregoing results are difficult to interpret, and would require further experiments for their elucidation. It is notable, however, that carrier conditions did not occur amongst animals vaccinated with living L. icterohaemorrhagiae or L. canicola, whereas they occurred amongst those vaccinated with living L. icterohaemorrhagiae Rachmat. In the vaccination tests it was demonstrated that better immunity against virulent L. icterohaemorrhagiae Weil was obtained with living non-virulent L. icterohaemorrhagiae Weil and living non-virulent L. canicola than with living non-virulent L. icterohaemorrhagiae Rachmat. Further immunization with chemically killed vaccines of virulent strains of L. icterohaemorrhagiae Weil were less successful in preventing this carrier condition than the living non-virulent forms. This result might be due to two causes, first, a higher degree of immunity might be obtained with the living non-virulent homologous form of vaccine than with the killed form, and, second, the living form may have some additional immunizing property which is absent from the killed form. It should be noted, however, that rats have been encountered in which the lytic titre of the serum was 1/10,000 and yet those animals were carriers of virulent leptospira.

TABLE IV. Carrier Conditions in Guinea-pigs Following upon Vaccination.

Exp. No.	Type of Vaccine.	No. of guinea-pigs completely immunized.	Kidneys of surviving animals inoculated into further guinea-pigs.	Result of Inoculation Tests.
1,2	L. icterohaemorrhagiae living non-virulent	32	7 pairs	No leptospiral infection.
3	L. icterohaemorrhagiae heat-killed virulent	6	1 pair	No leptospiral infection.
4	L. icterohaemorrhagiae phenolized virulent	6	1 pair	No leptospiral infection.
5,6	L. icterohaemorrhagiae formalinized virulent	12	2 pairs	One pair showed leptospiral infection.
7	L. icterohaemorrhagiae dettolized virulent	6	1 pair	Both animals showed typical leptospiral infectn.
8	L. canicola living non-virulent.	6	1 pair	No leptospiral infection.
9	L. canicola formalinized	5	1 pair	Both animals died of leptosp. infectn.
10,11	L. icterohaemorrhagiae Rachmat living non-virulent	12	4 pairs	Three pairs died leptospirosis. One pair survived

Vaccination of Human Beings.

As the results of the guinea-pig experiments appeared very satisfactory, it was resolved to test out the effect of leptospiral vaccines on various patients in hospital. The patients selected for this purpose were mild cases of scarlet fever whose illness had, to all intents and purposes, terminated within 48 hours of admission to hospital. They were for the most part children between the ages of 8 and 14 years. On admission, samples of blood were obtained, and later, if the blood gave a negative sero-reaction with L. icterohaemorrhagiae, and if the patient's condition warranted it, they were vaccinated. Tentative trials with killed leptospiral emulsions, grown on the medium already described, showed that the reactions produced by the subcutaneous inoculation of 1 c.c., and later 2 c.c., amounts of the vaccine were entirely negligible. Slight local reactions appeared at the site of inoculation, but in not a single case was there any degree of generalized disturbance as evidenced by fever, sickness or increased pulse rate. It was therefore decided to vaccinate the patients with two doses of vaccine at weekly intervals. By the time vaccination was completed the patients were ready to return to their homes, so by arrangement with the parents the children were brought back to hospital in order that blood samples might be obtained 2-3 weeks after the final dose of vaccine had been administered.

First series. For this purpose, a vaccine was prepared by growing a virulent strain of L. icterohaemorrhagiae in the medium already described at 30° C. for 4 days. The cultures were then treated with 1/5000 methiolate, and after 2 days were tested for the presence of living leptospira by cultural and animal inoculation tests. These tests showed that this dilution of the antiseptic was sufficient to sterilize the emulsion of leptospira. The patients were then inoculated with 1 c.c. of the killed vaccine (undiluted culture), and a second dose of 2 c.c. was given a week later. In all, eighty-two patients whose sero-reactions were negative, even in a dilution of 1/10, were so vaccinated. The results, so far as the production of demonstrable immune bodies, were not satisfactory. Thirty-three individuals out of the total of eighty-two returned for the blood examination, and of these, twenty-four gave entirely negative tests. In seven individuals the serum reacted with L. icterohaemorrhagiae to a titre of 1/10, and in one case only to a titre of 1/30.

Second series. In this series, forty individuals were vaccinated in the same way as those in the first series, but instead of using the killed virulent strain a methiolate-killed emulsion of a non-virulent strain of L. icterohaemorrhagiae was employed. Only fifteen of this series returned to give blood samples, and when these were tested only four reacted to a titre of 1/10 with L. icterohaemorrhagiae.

Third series. In this series, a leptospiral vaccine prepared by a firm specializing in immunological products was tried. The vaccine is prepared for the purpose of vaccinating dogs and foxes against leptospiral infections, and the dosage recommended is two of 1 c.c. at an interval of 1 week. In all, twenty-eight patients were vaccinated with two doses of vaccine, 1 and 2 c.c. respectively. The reactions produced by the vaccine were again entirely negligible. Of those vaccinated, thirteen returned to give blood for the sero-reaction. When these were tested only three samples reacted with L. icterohaemorrhagiae and that only in a 1/10 dilution.

Comment.

It will thus be seen that vaccination of human beings by the methods described did not stimulate the production of demonstrable immune bodies to the extent that might have been expected. It would appear from the guinea-pig experiments that a lytic titre of 1/10 would give ample protection/

protection against a virulent strain of L. icterohaemorrhagiae. When patients in the early stage of a leptospiral infection are treated with anti-leptospiral serum in even 40-80 c.c. amounts, there is definite clinical evidence of its curative effect, and yet it is not possible to demonstrate the presence of the foreign immune bodies in blood samples by the sero-reaction, the dilution being too great. It would appear, therefore, that the presence of small amounts of immune bodies in the tissues would be sufficient to give ample protection. At any rate it would seem very desirable indeed to vaccinate workers whose daily duties exposed them to a possible attack of leptospirosis - as in sewer workers. The foregoing experiments have demonstrated that this type of vaccination is well tolerated. In comparison with the guinea-pig experiments, however, the dosage in these series of human vaccinations is entirely out of proportion, and it would appear probable that increased dosage might give a better production of immune bodies, and consequently a higher grade of immunity. The final test for the efficacy of the method would require to rest on a comparison of the incidence of Weil's disease in a series of vaccinated and unvaccinated individuals who were exposed to possible infection.

SUMMARY.

A. Guinea-pig Experiments:

1. Guinea-pig vaccination experiments have shown that these animals can be rendered completely immune to infection with virulent strains of L. icterohaemorrhagiae when they are treated with non-virulent living vaccines, or formalinized, heat-killed, phenolized, and dettolized suspensions of virulent cultures.

2. Vaccination with homologous strains of L. icterohaemorrhagiae produced better immunity than when heterologous strains such as L. hebdomadis or L. icterohaemorrhagiae Rachmat are employed.

3. Immune bodies are demonstrable in the serum of guinea-pigs vaccinated with L. icterohaemorrhagiae Weil, and a lytic titre of 1/6 appears to indicate that sufficient protective antibodies are present.

4. Following upon vaccination and inoculation with virulent cultures, carrier conditions have developed in animals treated with chemically killed vaccines of L. icterohaemorrhagiae Weil and with living non-virulent suspensions of the heterologous strain L. hebdomadis and L. icterohaemorrhagiae Rachmat.

B. Human Vaccination Experiments:

1. Killed vaccines prepared from non-virulent and virulent forms of L. icterohaemorrhagiae Weil have been employed in vaccination experiments on human beings.

2. These vaccines given subcutaneously in doses of 1 and 2 c.c. amounts have been well tolerated, and gave rise to little local reaction and to no general disturbance.

3. Blood samples obtained from the vaccinated show that, when tested for lytic antibodies, the amounts produced are relatively small. The findings indicate the need for increased dosage to stimulate the further production of immune bodies.

The author is indebted to Dr. Douglas Bell, Senior Resident Medical Officer, Aberdeen City (Fever) Hospital, for much assistance in the vaccination of the human cases.

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II. THE ABERDEEN CHILD GUIDANCE CLINIC.

The Aberdeen Child Guidance Clinic was established five years ago. Dr. Norman Walker has issued the following interesting statement detailing its activities since initiation.

Five years ago, the Aberdeen Child Guidance Clinic - in whose work the City Health Department co-operates - was founded to provide expert guidance for otherwise normal children who exhibit some difficulty of thought or behaviour which the usual methods of inquiry cannot explain and the usual methods of correction cannot remove. The Clinic is in no way concerned with the diagnosis or certification of mental defectives. Nor is it concerned solely or even chiefly with delinquents. It exists to give expert assistance to parents, teachers, general practitioners, or social workers, who are worried or perplexed by a boy or girl, who, while otherwise perfectly normal, presents some problem of intellect, temperament or behaviour that needs special handling.

The Aberdeen Clinic, like similar Clinics elsewhere, is conducted, not by an individual person, but by a team, which comprises two psychologists, a physician, a pediatrician, and a social worker. The Clinic's organisation thus provides for a thorough psychological and medical examination of each child, and for direct contact with his home environment. The psychologists are Mr. Rex Knight and Dr. Norman Walker, of Aberdeen University; the physician is Dr. George Swapp, nominated by the Aberdeen Branch of the British Medical Association, which has also nominated Dr. John Craig as consulting pediatrician. The City Health Department is connected with the Clinic's activities by its provision of the social worker, Miss B.J. Laidlaw, whose "indispensable and much appreciated services" have been gratefully recorded in the Clinic's Reports.

The Clinic, which is held in the Departments of Education and Psychology at Marischal College, is open from 9 a.m. to 1 p.m. every Saturday, and at other times when required.

In December, 1936, Character and Personality, an international psychological quarterly, contained an account by Dr. Norman Walker of the Aberdeen Clinic's first four years' work and an analysis of its first 200 cases. The following summary covers 230 cases and deals with the period April, 1932 to June, 1936, a little over four years.

Intelligence and Age.

Analysis of the cases treated shows that all grades of general intelligence are represented, though the dull outnumber the bright by almost six to one. Nevertheless, about forty per cent. of all the children tested for intelligence fall within the normal range (Intelligence Quotient 90 to 109). In age, the cases vary from two to over twenty, but the incidence at the different ages is by no means uniform. There are two critical age periods, namely, from 6 to 8 and from 13 to 15 years, or the beginning and end of school life. The first represents the period of adjustment to school and covers the transition from Infant to Junior Department. The second is the adolescent stage with the attendant difficulties in social adaptation and disturbances in emotional life.

Sex Differences.

Sex differences are apparent in the total numbers of boys and girls (142 boys to 88 girls), but they are not so marked in age distribution. For both sexes the critical periods are the same, from 6 to 8 years and from 13 to 15 years. The girls have a lower median Intelligence Quotient (86) than the boys (92). Scholastic backwardness accounts for roughly a third of each sex. Behaviour difficulties are reported relatively more frequently among girls, temperamental disturbances among boys. Stammering is predominantly a boy's complaint.

Child's Position in the Family.

Forty-two of the cases represent 'only' children. The percentage is high and is probably significantly higher than the incidence of 'only' children in the population of non-problem children. The position of the child in the family where there are several children is not a matter of indifference. Out of 113 children from families of three or more children (average 4.7), 30 were oldest children as against a chance expectation of 24. Thus the first born would appear to present more difficulty in upbringing than succeeding children, owing, no doubt, to lack of experience on the part of the parents, and to difficulties on the child's part in accommodating himself to the birth of the next child.

Sources.

The main source from which cases are referred to the Clinic is the school, somewhat under half of the children being sent by headmasters and headmistresses; but it should be noted that in these cases the problem is not usually concerned exclusively with the child's progress in school. Parents and relatives come next in order of frequency, followed by social agencies and family physicians. The last-named is a source which has shown steady increase as the work of the Clinic has become better known. Six young persons came to the Clinic on their own initiative.

Problems.

The problems which result in children being brought to the Clinic admit of no simple classification. In many cases the problem is a mixed one. The most numerous are those concerned with scholastic backwardness, general or special. Difficulties of behaviour of a minor nature account for about one-fifth of the cases. Next come cases of speech difficulty, generally involving stammer. This group tends to be above rather than below the average in intelligence, although different grades are represented. Temperamental disturbances, resulting indirectly in stealing, truancy or being out of control of parents or guardians, account for a certain proportion of cases. The desire for educational and vocational guidance is the motive bringing more than ten per cent. of the children or young persons to the Clinic.

Causation.

In the causation of children's problems, home conditions were the most important. Domestic disturbance lay at the root of almost one-third of the cases. This heading includes unsatisfactory social environment, faulty treatment by parents, (e.g. over-severity), illegitimacy and its accompaniments, and parental discord. In other cases, spoiling by the mother or father was noted, the children concerned being almost invariably boys. Low intelligence accounted for most of the cases of educational backwardness, but by no means for all. Poor heredity was thought to be a causative factor in fifteen cases and physical illness or defect a primary cause in twenty-two. Twelve cases were diagnosed as mentally defective and referred, by arrangement, to the School Medical Officer.

Prognosis.

After the prescribing and supplying of appropriate treatment comes the follow-up process, which falls mainly to the Social Worker. Only from information obtained after a proper interval, can the success or failure of the guidance be estimated, and only time will show whether the problem has been successfully solved. From the reports of our Social Worker, it appears that a single visit to the Clinic often has a beneficial effect both on the child and on the parents. The unemotional atmosphere of the interview, the objective attitude of the psychologist, the realisation that the child's problem is not unique, all these factors combine to form an attitude therapy, which is itself of considerable value. But repeated visits are often necessary. The estimation of final success or failure is difficult. It would be untrue to say that every child is helped. But there is little doubt that the majority of cases are bettered and many of the problems solved.

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CHAPTER II.

INFECTIOUS DISEASES.

Table I on page 16 gives the death-rate from each of the principal infectious diseases since the second year of registration. In Table II the number of cases of and deaths from each disease is stated for the successive months of the year. Table III gives the morbidity and mortality from infectious diseases distributed according to ages and where treated, and in Table IV the cases and deaths are supplied for each of the years 1926 to 1936.

DISEASES WITH A SPECIFIC PROPHYLAXIS.

Small-pox.

Aberdeen has remained free from Small-pox since 1930. No case of Small-pox occurred in Scotland in 1936.

Vaccinia.

The passing of the Vaccination (Scotland) Act, 1907, permitted exemption from vaccination of those children whose parents declared formally that they had conscientious objection to vaccination. Table V shows the percentage of the total surviving children - at the end of the calendar year following the year of birth - who have remained unvaccinated in each year from 1907 to 1935. In 1935, the proportion of children thus escaping vaccination was 15.1 per cent.

Prior to the passing of the Vaccination (Scotland) Act, 1907, over 91 per cent. of the children born in Scotland and surviving at the time of statutory vaccination were successfully vaccinated. In 1934, this percentage had fallen to 46.0 for all Scotland, whereas in the City of Aberdeen it was 82.2. The Vaccination Act, through its Conscientious Objection Clause, has rendered vaccination futile as a means of prevention of small-pox. It would appear that compulsory vaccination might logically be abandoned provided that compulsory vaccination, without restriction, were adopted when small-pox appeared in Scotland, either in sporadic or epidemic form.

Scarlet Fever.

In 1936, 717 cases were notified, as against an average of 884 in the preceding ten years. There were 7 deaths, giving a case mortality of 1.0 per cent., as against an average rate of 0.7 in the preceding decennium. Of the 7 deaths, 3 occurred in children under five years, 2 in children in the 5-15 age-period, and the remaining 2 in adults.

The number of cases removed to hospital in 1936 was 571 or 80 per cent. of the cases, as compared with 81 per cent. in 1935. There were 5 deaths in hospital, giving a hospital case-mortality of 0.9 per cent.

From September, 1933, when the disease assumed epidemic prevalence, until April, 1936, when there was a distinct decline, there were 4,973 cases notified with 35 deaths, giving a case-mortality of 0.7 per cent.

The most striking feature of scarlet fever during this period is its exceptional mildness as compared with certain previous epidemics. In 1915, a year of epidemic prevalence, 1,873 cases and 142 deaths were recorded, giving a case-mortality of 7.6 per cent.

Diphtheria.

This disease, coincidently with scarlet fever, has been prevalent during the last three years. In 1936, 497 cases were notified as compared with an average of 425 in the 1926-1935 decennium. In 1935 and 1934, the cases numbered 698 and 719 respectively. As regards deaths, there were 17 deaths in/

in 1936 giving a case-mortality of 3.4 per cent., as against 4.6 in 1935 and 3.5 in 1934. Of the 17 deaths, 10 occurred in children under 5 years of age, 6 in children in the 5-15 year age-period, and the remaining fatal case occurred in an adult. The percentage of cases receiving hospital treatment was 98.

Of contacts bacteriologically examined, 3.0 per cent. of the swabbings gave positive findings. During the preceding decennium, the percentage of positive swabbings averaged 0.8

Diphtheria Immunisation.

On 17th August, 1936, the Town Council authorised the re-introduction of a campaign in connection with active immunisation against Diphtheria of children of school and pre-school ages.

As regards school children, the Scheme embraced only "entrants" at each session, and in addition, facilities were extended for immunisation being carried out at the several Child Welfare Centres throughout the City and at the Centre at the City Hospital. The work actually commenced on 14th September, 1936, and the statistics herewith appended therefore refer only to the period September to December, 1936.

The total number of children beginning school life during the term ended 31st December, 1936, including entrants to the Demonstration School, was 1,747.

The total number of consents received for entrants during the above term was 985 or 56.4 per cent. Of these, only 928 were actually inoculated in school, supervening illness and retraction of consent accounted mainly for the non-inoculation of the remaining 57. In addition, 21 school entrants were inoculated by their family doctors, so that 949 out of a possible 1,747 were actually inoculated during the period - a percentage of 54.3. The percentage of entrants inoculated varied from 100 per cent. in the case of Kirkhill School, Nigg, to 16.7 per cent. in the case of Queen's Cross R.C. School.

At the request of parents of school children who had entered school prior to August, 1936, and were of various ages up to 10 years, 452 children were inoculated in the schools, and 59 by family doctors.

As regards pre-school children, 295 were inoculated in the schools, 38 by family doctors, 28 at the Mother and Child Welfare Centres, and 8 at St. Peter's Nursery School - a total of 369. It should be remembered, however, that invitations for pre-school children were specifically issued only to parents who had children entering school for the first time during the period under review. It should also be noted that the immunising material used by the family doctors was provided by the Local Authority free of cost to the practitioners, provided that records of the cases were transmitted to the Public Health Department. There is reason to believe that not all the records of children actually inoculated by family doctors have been so returned, and the number of children actually immunised during the period is therefore greater than the above figures would indicate. Further, several of the school children for whom consent was originally given, but who were not actually inoculated in 1936, were immunised in 1937.

As practically all children under seven years of age are susceptible to diphtheria, Schick testing was not resorted to. The "one-shot" method of immunisation was adopted and the immunising agent used was Alum Precipitated Toxoid. In only one instance was there any local reaction, and this consisted of slight inflammation of the arm; the child was rather fractious and may have infected the arm immediately after the injection had taken place. On the whole, it may safely be stated that the number of local reactions after A.P.T. are very few indeed, and in any cases where abscess formation has occurred, it has usually been found to be due to faulty technique.

The success of any diphtheria immunisation scheme depends entirely on the number of consents obtained, and the average percentage of consents for the first three and a half months, namely, 56.4, cannot be regarded as satisfactory.

Typhoid and Para-typhoid Fevers.

Four cases of typhoid and 6 of para-typhoid B. fever were reported in 1936, and all received treatment in the City (Fever) Hospital. There was no association between the cases. None of these cases proved fatal, but three deaths occurred in 1936 among cases notified in the previous year, 2 of which originated in the Woodside area.

Venereal Diseases.

A detailed analysis of cases of venereal diseases which have come to the knowledge of the Health Department is given in the section of this Report dealing with the Venereal Diseases Services. During the year there were 245 fresh City cases of syphilis, 331 of gonorrhoea, 8 of soft chancre, 143 of non-specific venereal infections and 87 cases of conditions other than venereal, making a total of 814 cases, as compared with 880 cases in 1935.

DISEASES SPREAD BY DISCHARGES FROM THE MOUTH AND NOSE.

Measles.

The number of cases reported to the Health Department in 1936 was 114. As Measles is not a compulsorily notifiable disease, this is not altogether an absolutely accurate measure of its incidence. Our sources of information are chiefly from the School Attendance Officers whose services in this connection are much appreciated. Apart from information obtained from these Officers and from Health Visitors attached to the Mother and Child Welfare Department, cases of measles occurring under the age of 5 are seldom brought to our notice.

There were 4 deaths, all occurring in children under 2 years of age. The total number of cases in 1935, an epidemic year, was 2,849 with 28 deaths. In 1936, 20 of the 114 cases received treatment in the City Hospital and 1 of these proved fatal.

Measles Prophylaxis.

It is now considered advisable that, on account of the high death-rate occurring from complications of measles, complete protection should, if possible, be given, not only to children under three years of age, but also to weakly, debilitated children and to children suffering from acute and chronic ailments.

Passive immunity may be effected by the use of convalescent serum, convalescent blood, adult serum or adult blood. In actual practice, serum is always preferable to blood. Comparatively recently, placental extract has been tried as a substitute for adult serum. It is an American preparation and is now available through various commercial firms. It is not so effective as convalescent serum but it is more efficacious than adult serum. In a child under eight years of age, the dose of convalescent serum is 5 c.c., and for those over eight years of age, 10 c.c. should be administered.

German Measles.

An epidemic of German Measles occurred in 1936 during the months of April, May and June. There were 550 cases of this disease reported in 1936, as against an annual average of 60 in the preceding decennium. There were no deaths.

Whooping Cough.

An epidemic of whooping cough also made its appearance in the first half of 1936. A total of 767 cases was reported, with 25 deaths, giving a case-mortality of 3.3 per cent. Of the 25 deaths, 16 occurred in children under 1 year and the remainder in children 1-5 years. The average annual number of cases during the 1926-35 decennium was 461, with a case-mortality of 4.3. Of the 42 cases receiving treatment in the City Hospital, 8 died.

Whooping Cough Prophylaxis.

Whooping cough is not a notifiable disease, but in Aberdeen during the past year it had the highest death-rate among the ordinary zymotic infections. As this disease is now a major - almost the major - killing disease of childhood, it would seem eminently desirable, in view of these figures, that/

that active immunisation should be practised on the largest possible scale. Whooping cough is a disease of early childhood, and every effort should be made to vaccinate children towards the close of the first year of life or early in the second year.

Recently a vaccine has been used in connection with this disease. Extensive trials have been made by Madsen in connection with outbreaks of the disease in the Faroe Islands in epidemics occurring in 1923-24 and in 1929. These trials suggested that active immunisation with Haemophilus Pertussis vaccine is only moderately effective in preventing the disease, but is of real value in decreasing both severity and mortality.

More recent trials in America by Sauer with vaccine made from a freshly-prepared strain of H. Pertussis have given even more encouraging results. This vaccine is usually prepared so as to contain 10,000 million bacilli per c.c. Four injections are given - 1 c.c., 1.5 c.c., 1.5 c.c., and 3 c.c. These injections are given subcutaneously, and in order to avoid local reaction, it is considered advisable that the last dose of 3 c.c. should be injected in equal amounts at two different sites.

Influenza.

Influenza, as distinct from influenzal pneumonia, is not a compulsorily notifiable disease. Influenza, excluding influenzal pneumonia, was registered as the cause of 4 deaths in 1936, as against 22 in 1935.

Acute Primary and Influenzal Pneumonia.

There were 503 cases of primary pneumonia notified in 1936, with 86 deaths. During the preceding ten years, the average annual number of cases was 628, and the average annual number of deaths 123. Of influenzal pneumonia, there were 6 cases with 2 deaths in 1936, as against an annual average of 44 cases and 14 deaths in the preceding decennium.

Meningococcic Meningitis.

Two cases of this disease were notified in children under one year, and one of these proved fatal. A death also occurred in 1936 of a case notified in the previous year. During the preceding ten years, the average annual number of cases was 5, and the average annual number of deaths 3.

Acute Anterior Poliomyelitis (Infantile Paralysis).

No cases of this disease were notified in 1936.

Epidemic Encephalitis.

One case of this disease, in a female adult, proved fatal. The case was receiving treatment in an institution not belonging to the Local Authority.

Tuberculosis.

A detailed analysis of the cases of and deaths from tuberculosis in Aberdeen is given in the section relating to the Tuberculosis Services.

Chickenpox.

This disease, by order of the Department of Health for Scotland, ceased to be compulsorily notifiable in December, 1932. During 1936, 61 cases of chickenpox were voluntarily brought to the knowledge of the Health Department.

DISEASES SPREAD BY THE EXCRETA.

Typhoid and Para-typhoid Fevers.

These diseases have already been referred to under the group of diseases for which there is a specific prevention.

Dysentery /

Dysentery.

During 1936, there were 97 cases of dysentery notified, of which 43 received institutional treatment. There were 3 deaths in children, two aged 1 year and one aged 2 years. During the preceding ten years, the average annual number of cases was 84, and the average annual number of deaths 2.

DISEASES SPREAD BY CUTANEOUS INOCULATION.

Erysipelas.

During 1936, there were 138 cases of erysipelas reported, with 13 deaths. In the 1926-1935 decennium, the average annual number of cases was 120, and the number of deaths 7.

Scabies.

A record of the number of cases of other inflammatory affections of the skin, including Scabies, receiving treatment at the Skin Department of the City Hospital, is given in the section of this Report dealing with Municipal Hospital Services.

DISEASES ASSOCIATED WITH CHILD-BIRTH.

Puerperal Fever and Puerperal Pyrexia.

During 1936, 94 cases of puerperal fever and puerperal pyrexia were brought to the notice of the Department.

Puerperal Fever.

Of 68 proved cases of puerperal fever, 13 cases occurred among mothers ordinarily residing outside Aberdeen but resident temporarily in the City for purposes of confinement. There were 7 deaths of mothers, all belonging to the City. All the cases received treatment in the City Fever Hospital.

During the 1931-1935 quinquennium, the average annual number of cases among mothers belonging to the City was 81, and the deaths 8.

Puerperal Pyrexia.

A total of 26 cases was finally regarded as puerperal pyrexia, the cause of the rise in temperature being attributed in most cases to mastitis. Of the 26 cases, 7 occurred among mothers ordinarily residing outside the City. There were 3 deaths, including 1 from outwith the City, and the causes of death were tuberculous broncho-pneumonia; empyema, and carcinoma of uterus. Of the 26 cases, 19 received treatment in the Municipal Hospitals, 3 in Maternity Homes, and in 4 cases the patient was retained at home.

During the 1931-1935 quinquennium, the average annual number of cases among mothers belonging to the City was 23, and the deaths 3.

For further details regarding puerperal fever and puerperal pyrexia, reference should be made to the Section of the Report which deals with Maternity and Child Welfare Services.

Ophthalmia Neonatorum.

During 1936, there were notified 90 cases of ophthalmia neonatorum; this is equivalent to 28 cases per 1,000 registered births. Additional information regarding this disease is given under the heading Maternity and Child Welfare Services.

INSECT and VERMIN-BORNE DISEASES.

Typhus Fever, Plague

There were no cases of these diseases during the year 1936.

Infective Jaundice.

During the year, 16 cases of this disease were brought to the knowledge of the Department as having occurred in the City. All were employed in the handling of fish. All the cases received institutional treatment. There was 1 death - a male adult.

In the Annual Report for 1935, it was reported that 40 cases of proved Weil's Disease among fishworkers had occurred in Aberdeen in the latter half of 1934 and in 1935.

TABLE I. - ABERDEEN - DEATHS AT ALL AGES FROM SELECTED CAUSES.
(per 100,000 of population) - Years 1856-1936.+

Year.	Smallpox.	Scarlet Fever.	Diphtheria and Croup.	Measles.	Whooping Cough.	Influenza.	Typhus Fever.	Typhoid and Paratyphoid Fever.	Tuberc. Dis Respiratory.	Tuberc. Dis Other Tuberculosis.	Dis. of Digestive System (inc. Diarrhoea)	Cancer and other Malignant Diseases.	Bronchitis.	Pneumonia.	Dis. of the Circulatory System. ✱
1936	0	4	10	2	14	3	0	2	40	9	68	155	51	76	331
1935	0	6	18	16	4	20	0	4	40	16	68	168	57	125	289
1934	0	9	14	3	10	5	0	0	52	12	69	160	41	83	277
1933	0	3	6	6	10	35	0	0	54	12	80	155	56	98	267
1932	0	1	4	14	21	10	0	0	46	26	77	160	62	88	267
1931	0	4	4	5	14	18	0	1	69	21	57	151	83	116	280
verage 1931-35	0	5	9	9	12	18	0	1.0	52	17	70	159	60	102	276
1930	1	1	7	14	9	6	0	0	51	20	76	144	47	94	256
1929	0	1	12	0	8	42	0	0	55	26	75	162	75	142	279
1928	0	3	9	30	22	12	0	1	68	34	77	149	57	89	242
1927	0	2	9	1	9	25	0	0	64	33	71	140	71	98	220
1926	0	4	12	12	9	21	0	0	72	38	90	128	54	77	202
verage 1926-30	0.2	2	10	11	11	21	0	0.2	62	30	78	145	61	100	240
" 1921-1925	0	5	11	33	29	27	0	1	88	31	80	140	80	92	195
" 1916-1920	0	6	16	22	23	73	0	3	106	43	87	121	99	122	178
" 1911-1915	0.2	38	42	56	32	16	0	4	111	49	124	116	101	128	184
" 1906-1910	0	6	15	26	42	20	0	2	116	61	115	103	105	116	180
" 1901-1905	0.1	8	9	41	47	20	3	4	138	69	162	87	145	125	179
" 1896-1900	0	23	18	35	53	29	0.2	9	167	70	210	87	172	109	167
" 1891-1895	0.4	21	22	63	52	56	1	10	181	72	190	81	210	100	156
" 1886-1890	1	14	10	80	66	9	1	15	184	67	202	68	216	100	175
" 1881-1885	0.2	13	15	36	67	1	6	13	204	74	185	69	251	82	159
" 1876-1880	1	35	30	28	66	2	19	29	223	101	194	61	286	72	146
" 1871-1875	48	68	30	53	68	5	20	35	243	107	214	56	281	60	136
" 1866-1870	4	71	5	50	62	8	62	49	298	130	259	59	238	70	122
" 1861-1865	36	93	49	51	62	12	176		274	128	280	57	220	59	122
" 1856-1860	40	118	54	70	69	12	109		322	179	203	56	182	58	111

+ Corrected for transferred deaths in 1904 and subsequent years.

✱ From 1911 onwards, Cerebral Embolism and Thrombosis excluded.

TABLE II. - PROGRESS OF INFECTIOUS DISEASES DURING PRECEDING TWELVE MONTHS.

		1936.												Whole Year.
		Jan.	Feb.	Mch.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Compulsorily Notifiable.														
allpox ...	Cases	...	...	...	...	...	...	...	...	...	...	...	...	...
	Deaths	...	...	...	...	...	...	...	...	...	...	...	...	...
arlet Fever ...	Cases	88	104	86	42	41	24	42	37	55	58	68	72	717
	Deaths	1	2	..	1	..	..	..	1	1	..	1	..	7
phtheria ...	Cases	61	56	56	38	38	32	24	16	37	36	56	47	497
	Deaths	3	..	3	2	1	..	1	1	1	1	..	4	17
phus Fever ...	Cases	..	..	..	..	..	..	..	..	..	..	..	..	...
	Deaths	..	..	..	..	..	..	..	..	..	..	..	..	...
iterica fections ...	Cases	2	1	1	1	2	..	..	1	1	..	..	1	10
	Deaths	1	1	..	..	1	..	..	..	..	..	..	..	3
sentery ...	Cases	11	12	19	6	15	7	7	1	1	10	6	2	97
	Deaths	..	..	1	..	1	..	..	1	..	..	..	..	3
ute Polio-myelitis ...	Cases	..	..	..	..	..	..	..	..	..	..	..	..	..
	Deaths	..	..	..	..	..	..	..	..	..	..	..	..	..
idemic Cerebro-pinal Meningitis[x]	Cases	..	..	..	..	1	..	..	..	1	..	..	..	2
	Deaths	1	..	..	..	..	..	..	..	1	..	..	..	2
idemic En-cephalitis	Cases	..	..	1	..	..	..	..	..	..	..	..	..	1
	Deaths	..	..	1	..	..	..	..	..	..	..	..	..	1
ute neumonia: Primary...	Cases	62	47	47	58	59	45	23	22	21	30	35	54	503
	Deaths	9	10	8	11	10	6	4	2	4	7	6	9	86
Influenzal.	Cases	..	2	..	..	..	..	..	..	2	..	1	1	6
	Deaths	..	1	..	..	..	..	..	..	..	..	1	..	2
bercle: Pulmonary	Cases	6	9	9	11	17	7	4	7	3	7	9	12	101
	Deaths	6	5	5	11	8	6	3	4	8	3	7	5	71
Other	Cases	4	4	5	7	4	4	3	5	2	5	3	5	51
	Deaths	2	3	..	1	1	..	3	2	1	2	..	1	16
rysipelas ...	Cases	19	13	10	12	15	7	7	8	8	9	16	14	138
	Deaths	..	4	..	3	3	2	..	..	..	..	..	1	13
uerperal Fever.	Cases	6	8	6	3	6	6	1	6	8	8	3	7	68
	Deaths	..	..	..	1	..	1	..	..	1	1	2	1	7
uerperal Pyrexia	Cases	1	2	6	1	1	2	2	2	4	1	2	2	26
phth. Neonatorum	Cases	7	4	5	9	6	2	5	8	6	7	16	15	90
alaria ...	Cases	..	..	..	..	..	..	..	..	..	..	..	..	..
	Deaths	..	..	..	..	..	..	..	..	..	..	..	..	..
nfective aundice	Cases	2	..	1	1	..	1	..	1	4	5	1	..	16
	Deaths	1	..	..	..	..	..	..	..	..	..	..	..	1
lague		..	..	..	..	..	..	..	..	..	..	..	..	..
Not Compulsorily Notifiable.														
easles ...	Cases	33	17	5	11	26	9	2	5	2	3	1	..	114
	Deaths	3	..	..	1	..	..	..	..	..	..	..	..	4
erman Measles...	Cases	..	3	2	26	285	198	6	8	10	10	2	..	550
	Deaths	..	..	..	..	..	..	..	..	..	..	..	..	..
hooping Cough...	Cases	69	128	145	141	113	48	9	35	19	25	24	11	767
	Deaths	3	1	6	1	1	2	3	2	1	1	3	1	25
hickenpox ...	Cases	..	3	8	9	6	6	4	..	1	5	13	6	61
	Deaths	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ...	Cases	371	413	412	376	635	398	139	162	185	219	256	249	3815
	Deaths	30	27	24	32	27	17	14	13	18	15	18	22	257
Influenza, excl. Influenzal Pneum.	Deaths	1	..	..	..	..	..	..	..	..	..	1	2	4

x Compulsorily notifiable from 1st October, 1929.

TABLE III. – MORBIDITY AND MORTALITY OF INFECTIOUS DISEASES DURING 1936.

Disease.		No. of Cases and Deaths at various Age-Periods.								Cases receiving instit. treatment.			Cases not receiving Instit. treatment.
		At all Ages	Years.							Municip. Hosps.		Other Insts.	
			Under 1	1–5	5–15	15–25	25–45	45–65	65+	City Hosp.	Woodend Hosp.		
ompulsorily Notifiable.													
allpox ...	Cases	–	–	–	–	–	–	–	–	–	–	–	–
	Deaths	–	–	–	–	–	–	–	–	–	–	–	–
arlet Fever.	Cases	717	9	216	340	91	49	11	1	569	–	2	146
	Deaths	7	–	3	2	2	–	–	–	5	–	–	2
iphtheria ...	Cases	497	27	120	239	79	29	3	–	487	–	6	4
	Deaths	17	3	7	6	–	1	–	–	16	–	–	1
nterica Infections...	Cases	10	–	1	2	3	3	1	–	10	–	–	–
	Deaths	3	–	–	–	1	1	1	–	3	–	–	–
ysentery ...	Cases	97	5	39	36	2	11	3	1	33	–	10	54
	Deaths	3	–	3	–	–	–	–	–	2	–	1	–
cute Polio-myelitis ...	Cases	–	–	–	–	–	–	–	–	–	–	–	–
	Deaths	–	–	.	–	–	–	–	–	–	–	–	–
pidemic Cerebro-spinal Meningitis	Cases	2	2	–	–	–	–	–	–	2	–	–	–
	Deaths	2	2	–	–	–	–	–	–	2	–	–	–
pidemic En-cephalitis	Cases	1	–	–	–	–	–	1	–	–	–	1	–
	Deaths	1	–	–	–	–	–	1	–	–	–	1	–
cute Pneumonia –													
(a) Primary...	Cases	503	47	129	106	56	85	49	31	182	172	26	123
	Deaths	86	17	16	1	3	16	18	15	18	37	8	23
(b) Influenzal	Cases	6	–	1	–	1	3	1	–	–	–	1	5
	Deaths	2	–	–	–	–	1	1	–	–	–	–	2
uberculosis Diseases –													
(a) Pulmonary	Cases	101	–	–	1	19	55	22	4	21	44	11	25
	Deaths	71	–	–	1	7	32	25	6	14	11	9	37
(b) Other ...	Cases	51	1	10	17	13	5	5	–	5	19	13	14
	Deaths	16	1	4	2	5	3	1	–	3	3	6	4
rysipelas ...	Cases	138	12	10	2	5	35	47	27	74	1	10	53
	Deaths	13	2	–	–	.	1	7	3	6	2	2	3
uerperal Fever	Cases	68	–	–	–	26	42	–	–	68	–	–	–
	Deaths	7	–	–	–	1	6	–	–	7	–	–	–
uerperal Pyrexia	Cases	26	–	–	–	7	19	–	–	15	4	3	4
phth. Neonatorum	Cases	90	90	–	–	–	–	–	–	5	–	5	80
alaria ...	Cases	–	–	–	–	–	–	–	–	–	–	–	–
	Deaths	–	–	–	–	–	–	–	–	–	–	–	–
nfect. Jaundice	Cases	16	–	–	–	8	5	3	–	11	1	4	–
	Deaths	1	–	–	–	–	–	1	–	–	–	1	–
lague ...		–	–	–	–	–	–	–	–	–	–	–	–
ot Compulsorily Notifiable.													
easles ...	Cases	114	11	37	54	10	2	–	–	20	–	6	88
	Deaths	4	3	1	–	–	–	–	–	1	–	–	3
erman Measles.	Cases	550	10	58	479	1	2	–	–	7	–	–	543
	Deaths	–	–	–	–	–	–	–	–	–	–	–	–
hooping Cough	Cases	767	96	280	390	–	1	–	–	42	–	2	723
	Deaths	25	16	9	–	–	–	–	–	8	–	2	15
Chickenpox ...	Cases	61	7	19	33	1	1	–	–	10	–	–	51
	Deaths	–	–	–	–	–	–	–	–	–	–	–	–
Total ...	Cases	3815	317	920	1699	322	347	146	64	1561	241	100	1913
	Deaths	257	44	43	12	18	60	54	24	85	53	29	90

TABLE IV. - MORBIDITY AND MORTALITY OF INFECTIOUS DISEASES DURING EACH YEAR FROM 1926 to 1936.

Disease.		1936.	1935.	1934.	1933.	1932.	1931.	1930.	1929.	1928.	1927.	1926.	Annual Average 1926-1935.
Compulsorily Notifiable.													
Smallpox ...	Cases	0	0	0	0	0	0	10	1	0	0	0	1
	Deaths	0	0	0	0	0	0	1	0	0	0	0	.0.1
Scarlet Fever...	Cases	717	1491	2122	1479	318	386	344	424	728	702	843	884
	Deaths	7	11	16	6	1	6	2	2	5	3	8	6
Diphtheria ...	Cases	497	698	719	301	205	326	505	410	458	303	323	425
	Deaths	17	32	25	11	6	7	12	20	15	15	20	16
Typhus Fever ...	Cases	0	0	0	0	0	0	0	0	0	0	0	0
	Deaths	0	0	0	0	0	0	0	0	0	0	0	0
Enterica Infecns.	Cases	10	55	7	9	5	3	8	7	16	7	3	12
	Deaths	3	7	0	0	0	1	0	0	1	0	0	1
Dysentery ...	Cases	97	91	66	143	95	94	91	66	97	48	44	84
	Deaths	3	4	1	2	2	2	3	3	1	4	1	2
Acute Poliomyelitis	Cases	0	1	2	10	1	1	1	2	2	3	5	3
	Deaths	0	0	1	1	0	0	1	1	0	0	0	0.4
Epidemic Cerebro-Spinal Meningitis	Cases	2	6	3	5	11	8	2	4	4	2	3	5
	Deaths	2	2	3	3	4	5	3	3	3	2	2	3
Epidemic Encephalitis	Cases	1	1	1	1	2	0	1	3	4	1	0	1
	Deaths	1	1	1	1	2	0	1	1	0	0	0	1
Acute Pneumonia — Primary	Cases	503	775	593	633	607	706	655	869	485	579	377	628
	Deaths	86	159	95	126	87	150	100	184	132	124	97	123
Influenzal	Cases	6	40	8	43	20	18	12	74	34	136	57	44
	Deaths	2	13	3	20	8	9	2	35	11	21	13	14
Tubercle: Pulmonary	Cases	101	120	107	128	140	146	128	126	150	184	219	145
	Deaths	71	71	90	93	79	116	85	91	113	105	119	96
Other	Cases	51	71	51	55	87	94	71	82	129	135	137	91
	Deaths	16	28	21	20	45	36	34	43	55	55	63	40
Erysipelas ...	Cases	138	128	149	113	94	107	144	132	119	95	120	120
	Deaths	13	5	8	6	6	8	11	10	6	2	5	7
Puerperal Fever	Cases	68	95	91	75	71	74	72	49	48	38	36	65
	Deaths	7	7	8	7	14	6	5	7	10	9	8	8
Puerperal Pyrexia	Cases	26	28	22	21	24	18	20	21	25	..	..	..
Ophth. Neonatourm	Cases	90	96	102	53	60	69	67	70	51	54	48	67
Malaria ...	Cases	0	5	2	2	3	6	5	4	7	4	6	4
	Deaths	0	0	0	0	0	0	0	0	0	0	0	0
Infect. Jaundice	Cases	16	18	23	0	0	0	0	0	0	0	0	...
	Deaths	1	1	1	0	0	0	0	0	0	0	0	...
Plague ...	...	0	0	0	0	0	0	0	0	0	0	0	0
Not Compulsorily Notifiable.													
Measles ...	Cases	114	2849	72	619	1562	203	2461	48	1812	199	991	1082
	Deaths	4	28	5	10	24	9	23	0	50	1	20	17
German Measles	Cases	550	24	12	27	365	34	9	15	65	22	25	60
	Deaths	0	0	0	0	0	0	0	0	0	0	0	0
Whooping Cough	Cases	767	153	436	330	752	797	375	428	579	395	362	461
	Deaths	25	7	18	17	36	24	15	13	37	15	15	20
Chickenpox	Cases	61	83	106	176	1340	718	866	466	397	336	265	475
	Deaths	0	0	0	0	0	0	0	1	0	0	0	0.1
Influenza, excl. Influenzal Pneum.	Deaths	4	22	5	39	9	27	8	35	10	21	20	20

TABLE V. - STATEMENT OF NUMBER OF DECLARATIONS OF CONSCIENTIOUS OBJECTION TO VACCINATION.

Year.	Registered Births.	Deaths before Vaccination	Survivors.	Con-scientious Objectors.	Percentage	Year.	Registered Births.	Deaths before Vaccination	Survivors.	Con-scientious Objectors.	Percentage.	Year.	Registered Births.	Deaths before Vaccination	Survivors.	Con-scientious Objectors.	Percentage
1907	4504	470	4034	84	2.1	1916	3627	401	3226	345	10.7	1925	3535	324	3211	262	8.2
1908	4450	511	3939	219	5.6	1917	2966	326	2640	347	13.1	1926	3557	291	3266	262	8.0
1909	4492	526	3966	339	8.5	1918	2817	351	2466	260	10.5	1927	3324	277	3047	243	8.0
1910	4300	448	3852	362	9.4	1919	3481	357	3124	357	11.4	1928	3448	258	3190	299	9.4
1911	4028	478	3550	406	11.4	1920	5010	500	4510	290	6.4	1929	3194	230	2964	269	9.1
1912	4152	511	3641	478	13.1	1921	4326	457	3869	364	9.4	1930	3431	245	3186	301	9.4
1913	3872	467	3405	491	14.4	1922	4038	398	3640	348	9.6	1931	3367	233	3134	323	10.3
1914	4041	481	3560	413	11.6	1923	3847	317	3530	305	8.6	1932	3111	246	2865	364	12.7
1915	3837	483	3354	412	12.3	1924	3527	352	3175	246	7.7	1933	3182	201	2981	348	11.7
												1934	3194	222	2972	400	13.4
												1935	3329	223	3106	470	15.1

CHAPTER III.

SPECIAL HEALTH SERVICES.

MUNICIPAL HOSPITAL SERVICES.

(a) WOODEND HOSPITAL.

Since the publication of last Report, there has been no change in the consultant staff at Woodend Hospital, but it is with great regret that one has to record the death of Dr. Hugh Ross Souper who acted as Ear, Nose and Throat Specialist for many years. His work was of the very highest character and his loss has been keenly felt by his professional colleagues.

Accommodation Available:

At Woodend Hospital, 324 beds are available and are allocated to the following diseases:-

(1) Infectious Diseases -

Tuberculosis	148	
Pneumonia	30	
Rheumatism	6	
		184 beds.

(2) Cases coming within the purview of the Maternity Service and Child Welfare Scheme ... ... 16 beds.

(3) General Diseases -

Medical	74	
Surgical	50	
		124 beds.
Total ...		324 beds.

The number of beds allocated as between medical and surgical cases in the above-named category is fluctuating because, in senile cases, there is interchangeability in medical and surgical beds. The actual number of beds available for acute cases is 50 for surgical and 50 for medical cases.

Admissions and Discharges.

Table VI. gives the number of admissions and discharges during 1936.

TABLE VI. - ABERDEEN - WOODEND HOSPITAL. Year 1936.

	In Hospital on December 31, 1935.	Admitted during the Year.	Discharged during the Year.	Died in Hospital.	In Hospital on December 31, 1936.
A. General Hospital.					
Surgical Cases ...	72	527	445	94	60
Medical Cases ...	87	926	753	167	93
Gynaecological Cases	8	240	230	2	16
Total ...	167	1693	1428	263	169
B. Special Hospital.					
Tuberculosis -					
(a) Respiratory...	68	132	102	15	83
(b) Other ...	57	142	131	9	59
Rickets & Orthopaedic	10	14	15	2	7
Total ...	135	288	248	26	149
Total A and B ...	302	1981	1676	289	318

During 1936, the daily number of patients under treatment in the General Hospital varied from 156 to 201, the average daily number being 179. In the Special Hospital, the daily number of patients varied from 131 to 163, the average daily number being 150. In 1935, the average daily number of patients was 183 in the General Hospital and 133 in the Special Hospital.

In 1936, the total number of Public Assistance cases admitted was 869, with 190 deaths, as compared with 901 admissions and 195 deaths in 1935. With regard to cases from the County of Aberdeen and other Counties, there were, in 1936, 132 ordinary admissions with 16 deaths, whereas from the same areas, 181 cases were admitted to the Tuberculosis Wards, and of these 12 died; the corresponding figures for 1935 were 174 ordinary admissions with 23 deaths, and 124 cases of tuberculosis with 12 deaths.

The operations performed during the year numbered 1,014, of which 616 were performed under general or spinal anaesthesia.

In June, 1929, arrangements were come to with the Directors of the Aberdeen Royal Infirmary whereby the surgical waiting list of that institution would be decreased by the admission to Woodend Hospital of surgical cases whenever beds were available in the latter institution. During 1936, under this arrangement, 300 general surgical cases were dealt with, as compared with 281 in 1935. These cases were investigated and treated in Woodend Hospital by the surgeons of the Royal Infirmary, who had, in almost all cases, seen the patients in the first instance at the Out-patient Department of the Infirmary.

Treatment of Pneumonia:

During 1936, 214 cases of Pneumonia, including 41 cases from the County of Aberdeen and other counties, were admitted to Woodend Hospital and comprised 188 cases of lobar pneumonia and 26 cases of broncho-pneumonia. There were 49 deaths, of which 35 were due to lobar pneumonia and 14 to broncho-pneumonia. Eleven of the deaths occurred among county cases.

X-Ray Department:

A total of 2,353 cases attended the X-Ray Department and 3,455 films were taken. In 1935, the attending cases numbered 2,166, and the films 3,240. There is an increasing demand for X-Ray investigation as a diagnostic aid in both medical and surgical cases.

(b) OLDMILL HOSPITAL - Medical Report.

During 1936, the medical administration of Oldmill Hospital was carried out as in previous years and the arrangements for the treatment of Public Assistance cases sent to the institution were found to be adequate and to work satisfactorily.

The medical administration is carried out as follows:-

1. All cases arriving for admission are medically examined and are thereafter allocated either to wards in Woodend Hospital or to the ordinary wards in Oldmill Hospital, according to the findings of the examining Medical Officer. By this means, sick cases are admitted direct to Woodend Hospital.

2. The Medical Officer pays a daily visit to Oldmill Hospital for the purpose of (a) examining inmates who report sick, (b) removing to Woodend Hospital such persons as require special nursing and treatment, and (c) directing treatment in minor ailments (e.g. cuts and bruises) which can be carried out successfully in Oldmill Hospital by a trained nurse from Woodend Hospital.

3. All children are examined monthly or at any other time on request by the Chief Public Assistance Officer. Medical reports are furnished with regard to fitness for "boarding-out".

4./

4. All dormitories, beds, lavatories, clothing, food and cooking arrangements are periodically inspected.

The usual classification of cases was found to be satisfactory, viz:-

1. Infants, under 2 years of age.
2. Children, from 2-15 years of age.
3. Sick persons.
4. Aged and infirm persons.
5. Ordinary cases.

All children under 2 years of age are admitted to Woodend Hospital from which a number of healthy children are later transferred to Thorngrove Home for Mothers and Babies according to available accommodation in the latter institution. All sick infants are treated in Woodend Hospital.

At Oldmill Hospital, a Nursery is set aside for the accommodation of children between the ages of 2 and 15 years. The Nursery is a separate building and accommodates children only.

All inmates - irrespective of age - requiring medical or surgical hospital treatment are transferred to Woodend Hospital.

Aged and infirm cases are removed from Oldmill Hospital to Woodend Hospital when their physical or mental condition necessitates treatment in the sick wards.

Admissions: The number of Public Assistance cases admitted to Woodend Hospital during 1936 was as follows:-

	Males.	Females.	Total.
Transferred from Oldmill Hospital Wards ...	77	76	153
Public Assistance cases admitted direct to Woodend Hospital ...	379	337	716
Total ...		...	869

Of this number 115 were children.

Discharges: The number discharged from Woodend Hospital during the year was as follows:-

Males.	Females.	Total.
343	322	665

Deaths: During the year 190 Public Assistance cases died in Woodend Hospital.

Infectious Diseases: There were no cases of infectious disease in Oldmill Hospital during the year 1936.

Although the number of admissions to the Public Assistance Wards of Woodend Hospital in 1936 is 32 fewer than for the previous year, the congestion in these wards is still acute. This is due to the high percentage of cases of chronic disease amongst the admissions. These cases who, although unsuitable for Oldmill Hospital, do not require the expert nursing and medical attention given in Woodend Hospital.

Owing to a necessary re-arrangement of medical wards at Woodend Hospital, Summerfield Hospital was opened in the beginning of 1937. This Hospital formerly belonged to the Aberdeen County Council and is situated within ten minutes' walk of Woodend Hospital. The bed accommodation at Summerfield is 44.

In Oldmill Hospital the dietary is adequate; the sanitary arrangements are good and the cleanliness and state of repair of the buildings are excellent. The staff is competent and capable of carrying out the work entailed; the equipment is complete and up-to-date.

(c) CITY HOSPITAL.

The total number of beds available in the City Hospital is 285, but, as in every other Infectious Diseases Hospital, the wards are not earmarked definitely for any particular disease, the allocation of wards depending on the incidence of epidemics. The distribution normally is as follows:-

Diphtheria	93 beds.
Scarlet Fever...	60 "
Tuberculosis (male)... ...	26 "
do. (female) ...	50 "
Ailing Babies...	22 "
Puerperal Fever	16 "
Erysipelas	6 "
Miscellaneous Diseases (inc. Venereal Diseases) ...	12 "
	285 beds

The admissions to the City Hospital during 1936 are shown in Table VII.

Of the 2,243 admissions, 411 cases were admitted from areas outside the City. There were 167 deaths, of which 39 were among County cases.

TABLE VII. - ABERDEEN - CITY HOSPITAL. Year 1936.

	In Hospital on December 31, 1935.	Admitted during the year.	Discharged during the year	Died in Hospital.	In Hospital on December 31, 1936.
mallpox	...	...	...	...	...
hickenpox	...	7	6	...	1
carlet Fever	68	630	642	8	48
iphtheria	96	595	604	27	60
nterica Infections.. ...	33	21	47	3	4
ysentery	1	40	39	2	...
erebro-spinal Meningitis..	1	3	1	3	...
cute Poliomyelitis ...	1	2	2	...	1
cute Pneumonias	11	200	175	26	10
uberculosis	35	61	41	21	34
rysipelas	2	88	78	7	5
uerperal Fever & Pyrexia..	14	138	134	12	6
easles	11	38	48	1	...
hooping Cough	3	49	37	11	4
enereal Diseases	...	19	14	...	5
iling Infants	21	116	96	21	20
iscellaneous Cases.. ...	4	236	194	25	21
Total ...	301	2243	2158	167	219

The/

The admissions from areas outwith the City were as follows:-

	Cases.	Deaths.
Scarlet Fever	71	2
Diphtheria	112	9
Enterica Infections...	10	0
Dysentery	9	0
Cerebro-spinal Meningitis... ...	1	1
Acute Poliomyelitis...	1	0
Acute Pneumonias	23	1
Tuberculosis	8	3
Erysipelas	14	1
Puerperal Fever & Pyrexia... ...	55	5
Measles	11	0
Whooping Cough	4	3
Venereal Diseases	14	0
Ailing Infants	20	6
Miscellaneous Cases...	58	8
	411	39

The daily number of patients under treatment varied from 163 to 318.

The operations performed at the City Hospital during the year numbered 500, of which 450 were carried out under general or spinal anaesthesia.

X-Ray Department: A total of 1,344 cases attended the X-Ray Department; 1,562 films were taken.

Cleansing Block and Skin Department: Table VIII. shows that during the year the number of verminous persons, whether members of families with children of school age or not, disinfested at the City Hospital Cleansing Station, was 66, as compared with an annual average of 91 in the 1931-35 quinquennium. This table also shows that a total of 1,204 persons was treated for scabies or other skin affections in the skin wards of the Cleansing Station, as compared with an annual average of 698 in the preceding five years.

During the past few years there has been a very decided fall in the number of verminous cases requiring disinfestation and this is partly accounted for by the improved housing conditions and partly owing to the fact that the majority of female children now have short hair.

TABLE VIII. - ABERDEEN - CLEANSING STATION. 1936.

	Age-Groups (Years)				All Ages 1936.	Average 1931-35
	0-5	5-15	15-25	25 +		
Verminous Persons Cleansed	9	24	10	23	66	91
Scabies & other Skin Diseases Treated	158	465	196	385	1204	698
Total ...	167	489	206	408	1270	789

(d) KINGSEAT MENTAL HOSPITAL.

Statistics relating to Kingseat Mental Hospital are dealt with in the section of the Report relating to Mental Health Services.

TUBERCULOSIS SERVICES.

Mortality. There were 87 deaths from tuberculosis, 71 of these being due to pulmonary tuberculosis, 16 to non-pulmonary tuberculosis. Table IX. and Chart show the death-rate since 1856-60. The Chart also shows the comparison between Aberdeen and all Scotland. (Chart following p. 30).

The death-rates from tuberculosis for Scotland and in the four large Cities for the past four years are given in the following Table.

Death-rates from Tuberculosis per 100,000.

	1933.			1934.			1935.			1936.		
	Total	Resp.	Other	Total	Resp.	Other	Total	Resp.	Other	Total	Resp	Other
All Scotland	80	60	20	75	57	18	74	57	17	74	55	19
Glasgow ...	106	82	24	100	79	21	108	86	22	114	87	27
Edinburgh...	86	71	15	84	66	18	73	57	16	77	62	15
Dundee ...	84	58	26	80	54	26	89	67	22	82	60	22
Aberdeen ...	66	54	12	65	52	13	56	40	16	49	40	9

A further reduction has, therefore, occurred in the mortality from tuberculosis in Aberdeen, and a new low record has been achieved. It will be observed that the death-rate from all forms of tuberculosis in the City was 49. An equally low record has been established in the County of Aberdeen where, for 1936, the death-rate from all forms of tuberculosis was 46.

In 1936, the general death-rate was considerably lower in Aberdeen than in the other three cities, and the tuberculosis mortality was so strikingly low in comparison with the others that it is justifiable to lay emphasis on the fact that, in 1936, the tuberculosis death-rate of Aberdeen was 37 per cent. less than that of Edinburgh, 40 per cent. less than that of Dundee and 57 per cent. less than that of Glasgow.

The general and tuberculosis death-rates in Scotland and in the four large cities are shown in the following Table:-

General and Tuberculosis Death-rates in Scotland and in the Four Large Cities.

	Population estimated to middle of 1936.	General Death-rate per 1,000 of Population.	Tuberculosis Death-rate per 1,000 of Population.	Tuberculosis Death-rate as percentage of general Death-rate.
Scotland ...	4,971,200	13.4	.74	5.5
Glasgow ...	1,124,300	14.7	1.14	7.8
Edinburgh...	464,600	13.4	.77	5.7
Dundee ...	178,700	14.2	.82	5.8
Aberdeen ...	176,897	12.7	.49	3.9

Stated otherwise, in Scotland in 1936 there was 1 death from tuberculosis to 18 deaths from all causes; in Glasgow, 1 to 13, in Edinburgh and Dundee, 1 to 17 and in Aberdeen 1 to 26. In Aberdeen in 1926, there was 1 death from tuberculosis to 12 deaths from all causes, and in 1916, 1 to 10.

Correlation with the various environmental conditions - such as overcrowding, poverty, unemployment, poor nutrition, and the like - which may be taken as likely to be more important, on the whole, in tuberculosis than in all diseases taken together - is difficult, but at least it can be said that/

that in none of these is Aberdeen in an outstandingly better position than the other cities or than Scotland as a whole.

Take, for example, overcrowding. This is generally recognised to be one of the most important single factors from the point of view both of infection by tuberculosis and of the development of the disease as a progressive condition threatening life. It is shown, however, by the recent official enquiry that, while Aberdeen is in a somewhat better position than Dundee and Glasgow, it is rather worse than in Edinburgh.

In their Annual Report for 1936 the Department of Health for Scotland give the following percentages of overcrowded houses in the four Scottish cities and in comparative cities in England

Scotland.		England.	
Glasgow	29.12	Liverpool	7.4
Edinburgh	17.17	Bristol	2.1
Dundee	23.94	Sunderland	20.6
Aberdeen	22.05	Plymouth	6.0
Lanark County ...	31.45	Durham County.. ...	12.0

Plymouth has been taken as comparable with Aberdeen. It is a dockyard town of 206,200 population and its principal industries are shipbuilding, engineering and fishing. In 1935 its general death-rate was 13.2 per 1,000 and its tuberculosis death-rate was 99 per 100,000. In the same year, Aberdeen had the same general death-rate of 13.2 per 1,000 and a tuberculosis death-rate of 56 per 100,000.

The total tuberculosis mortality of 1936 of 49 per 100,000 of population is made up as follows:- (1) pulmonary tuberculosis - 40 per 100,000; and
(2) other, or non-pulmonary
tuberculosis - 9 per 100,000.
The death-rate from pulmonary tuberculosis - 40 per 100,000 - was the same in 1936 as in 1935 and is the lowest on record in Aberdeen. The reduction in 1936 in the death-rate from all forms of tuberculosis is due to the reduction in the death-rate from other or non-pulmonary tuberculosis, which has fallen to the unprecedented low level of 9 per 100,000. This is less than half of the mortality due to this cause in 1931 when it was 21, and less than a fourth of that of 1926 when it was 40.

It is interesting to note that this figure - 40 per 100,000 - which was the death-rate from non-pulmonary tuberculosis in 1926 - was in 1936 the death-rate from pulmonary tuberculosis. The death-rate from pulmonary tuberculosis has not decreased so much in proportion as non-pulmonary tuberculosis, but was in 1936 47 per cent. less than in 1926.

The death-rate from all tuberculosis in 1936, 49 per 100,000, was considerably less than half of what it was in 1926 - only ten years ago - when it was 115 per 100,000.

Taking five-year periods, which are obviously open to less error than single-year periods, and comparing the five year period 1932-36, with similar periods twenty years and forty years ago, other striking facts emerge.

The mean yearly death-rate from all tuberculosis 1932-36 was 61
" " " " " " " 1912-16 was 158
" " " " " " " 1892-96 was 250

The drop in mortality from all tuberculosis in the last twenty years was 61 per cent. as compared with a drop of 37 per cent. in the previous twenty/

twenty years. Instead, therefore, of the rate of fall slowing up as one might expect it to do when the base line is approached, there has been a remarkable acceleration. This increased rate of fall coincides with the twenty-five years during which direct anti-tuberculosis measures have been in existence.

The mean annual mortality from all tuberculosis in the five-year periods since 1912 is as under:-

1912-16	158
1917-21	140
1922-26	122
1927-31	94
1932-36	61

It is found that the mean annual mortality for all tuberculosis in the quinquennium 1917-21 was 12 per cent. less than that of 1912-16, that of 1922-26 was 13 per cent. less than that of 1917-21, that of 1927-31 was 23 per cent. less than that of 1922-26, and that of 1932-36 was 35 per cent. less than that of 1927-31. The acceleration of fall has, therefore, been more manifest in the last ten years and especially in the last five years.

The low death-rate in 1936 for non-pulmonary tuberculosis, namely, 9 per 100,000, is to be compared with 40, the rate in 1926, 48, the mean yearly rate of 1912-16, and 71, the mean yearly rate of 1892-96. This death-rate was, therefore, 88 per cent. less than ten years ago (1926), whereas the rate of 1926 was only 17 per cent. less than the mean yearly rate of 1912-16. The accelerated fall is probably due, to a large extent, to the greater use of adequately pasteurised milk, and when the actual deaths in 1936 are analysed, this explanation seems to be corroborated. Of the sixteen deaths due to non-pulmonary tuberculosis, fourteen were caused by tuberculous meningitis, miliary tuberculosis or generalised tuberculosis. As was reported previously, the proportion of bovine infection from milk in pulmonary tuberculosis in the North-East of Scotland is greater than in the rest of Scotland and much greater than in England. It is likely that the other types of tuberculosis would similarly present a greater proportion of infection by the bovine bacillus than further South, but it is highly probable that bovine infection is proportionally less in this group than in abdominal tuberculosis in which type it is recognised that, especially in childhood, the infection is bovine in a large majority of cases. There were only two deaths from abdominal tuberculosis in Aberdeen in 1936, one of a child of fifteen months, and the other of a woman of thirty-two; the latter had complications not directly associated with tuberculosis.

The deaths from abdominal tuberculosis in Aberdeen are shown in the following table:-

	Average.
1912-16	20
1922-26	14
1932-36	5
1936	2

As abdominal tuberculosis occurs mostly in young children, it reflects the bovine infection of a few years and the elimination of infective milk should theoretically be followed by a quickly lessening incidence of, and mortality from, this type of the disease. Pulmonary tuberculosis is, on the other hand, a disease, and a cause of death, which excludes childhood almost entirely and involves especially persons in late adolescence and early adult life. The effect of eliminating infection from cows' milk would not show itself in pulmonary tuberculosis until the lapse of perhaps twenty/

twenty or thirty years after such elimination. In that time, however, the effect might be considerable in Aberdeen and the North-East where it has recently been shown that the percentage of bovine infection in pulmonary tuberculosis is greater than elsewhere in Britain.

Notifications - Table X (A) gives the number of tuberculosis cases notified during the year, divided into pulmonary and non-pulmonary cases, and arranged according to sex and age-period. During 1936, 101 cases of pulmonary tuberculosis were notified as against an annual average of 145 in the preceding ten years. There were 51 cases of other forms of tuberculosis notified in 1936, as against an annual average of 96 in the 1926-1935 decennium.

As regards the Site of the Disease, in the 51 cases notified as suffering from tuberculosis other than pulmonary, 11 were suffering from abdominal tuberculosis, 8 from tuberculous meningitis, 8 from tubercle of bones and joints (including the spine), 17 from tuberculous glands (mainly cervical), 1 from tuberculosis of the skin and 6 from generalised and other tuberculosis.

There were 2 deaths of abdominal cases, 8 of meningitis cases, and 6 of other cases.

As regards the number of cases notified during the year in which diagnosis of tuberculosis was confirmed by the Tuberculosis Medical Officer, Table X (A) shows that the diagnosis was confirmed in 88 pulmonary cases, and 31 non-pulmonary cases, a total of 119 cases.

Table X (B) shows the number of persons belonging to Aberdeen at 31st December, 1936, who were known to be suffering from tuberculosis. The numbers are - 431 pulmonary cases and 185 non-pulmonary cases, a total of 616 cases.

Table X (C) gives particulars of those who died during 1936, detailing the period that elapsed between notification and death and between discharge from an institution and death.

Institutional Treatment. - Table X (D) gives the number of notified and un-notified cases which received treatment under the Tuberculosis Scheme in Sanatoria or other institutions during 1936. Of the 179 cases admitted, 119 were cases of pulmonary tuberculosis and 60 were cases of non-pulmonary tuberculosis. The number of notified cases admitted to each institution is as undernoted:-

	1936.		
	Pulmonary Tubercle.	Other Tubercle.	Total.
City Hospital - Wards and Shelters...	45	5	50
Woodend Hospital " " ...	61	29	90
Royal Infirmary	4	10	14
Kingseat Mental Hospital	2	0	2
Royal Hospital for Sick Children ...	0	11	11
Royal Mental Hospital	1	0	1
Other Hospitals	2	1	3
Nursing Home	1	0	1
Tor-na-Dee Sanatorium	2	0	2
Total Admissions	118	56	174
Deduct cases treated in two institutions	4	6	10
	114	50	164

As to outdoor institutional treatment, 904 cases, all of which were of pulmonary tuberculosis except 11[illegible], received treatment at the Tuberculosis Institute at the City Hospital. The total number of attendances during the year was 6,444.

TABLE IX. - ABERDEEN. - MORTALITY FROM TUBERCULOSIS IN YEARS 1856-1936.*

per 100,000 of Population.

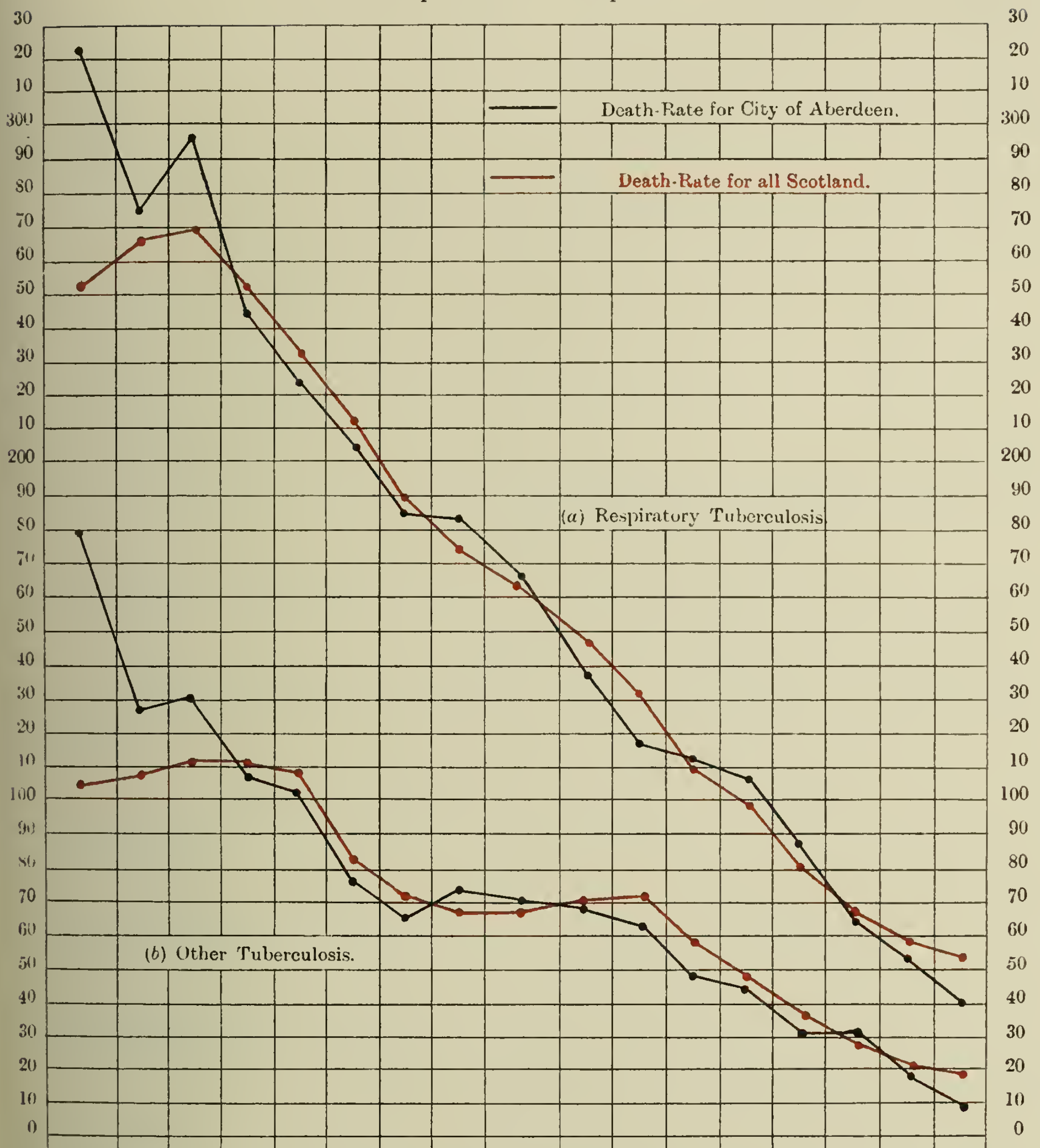
Period.	Respiratory Tuberculosis.			Other Tuberculous Diseases.			All Tuberculous Diseases.		
	Males	Females	Both Sexes.	Males	Females	Both Sexes.	Males	Females	Both Sexes.
1856-60 .	333	312	322	235	135	179	568	447	501
1861-65 .	267	279	274	158	103	128	425	382	402
1866-70 .	295	300	298	170	98	130	465	398	428
1871-75 .	234	250	243	129	89	107	363	339	350
1876-80 .	217	228	223	112	92	101	329	320	324
1881-85 .	189	216	204	90	62	74	279	278	278
1886-90 .	179	188	184	76	60	67	255	248	251
1891-95 .	179	183	181	83	62	72	262	245	253
1896-1900 .	166	168	167	77	64	70	243	232	237
1901-05 .	143	134	138	79	62	69	222	196	207
1906-10 .	119	113	116	74	51	61	193	164	178
1911-15 .	125	99	111	53	47	49	177	146	160
1916-20 .	104	107	106	49	39	43	153	146	149
1921-25 .	99	81	88	37	27	31	136	108	119
1926-30 .	68	57	62	34	27	30	102	84	92
1931-35 .	66	40	52	22	14	17	88	54	69
1931 . .	83	57	69	32	13	21	114	70	90
1932 . .	56	37	46	33	22	26	89	59	72
1933 . .	76	35	54	14	10	12	90	45	66
1934 . .	73	34	52	15	10	12	88	44	64
1935 . .	46	36	40	14	18	16	60	54	56
1936 . .	50	31	40	12	6	9	62	37	49

* Corrected for transferred deaths in 1904 and subsequent years.

Tuberculosis, 1856–1936.—Quinquennial Periods.

All Ages. Both Sexes.

Deaths per 100,000 of Population.



Yrs.	1856-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-1900	01-05	06-10	11-15	16-20	21-25	26-30	31-35	1936
	(a) Respiratory Tuberculosis.																
Abdn.	322	274	298	243	223	204	184	181	167	138	116	111	106	88	62	52	40
All Scot.	253	266	270	254	234	213	190	175	166	148	131	110	99	81	68	59	55
	(b) Other Tuberculosis.																
Abdn.	179	128	130	107	101	74	67	72	70	69	61	49	43	31	30	17	9
All Scot.	104	109	112	111	109	83	71	68	69	70	73	59	48	36	28	21	19

(Corrected for transferred deaths in 1904 and subsequent years.)

TABLE X. - ABERDEEN - (A). CASES OF TUBERCULOSIS NOTIFIED IN 1936.

		NUMBER OF CASES NOTIFIED AS SUFFERING FROM TUBERCULOSIS.									Number of Cases Notified during year in which diagnosis of Tuberculosis has been confirmed.	
		AGE-GROUPS.										
		Under 5	5-10	10-15	15-25	25-35	35-45	45-65	65 upwards	Total	Under 15	15 and upwards
Pulmonary ...	Males	-	-	1	8	19	15	16	3	62	-	55
	Females	-	-	-	11	16	5	6	1	39	-	33
Non-pulmonary	Males	7	5	9	1	-	1	3	-	26	13	3
	Females	4	2	1	12	2	2	2	-	25	1	14

TABLE X. - ABERDEEN - (B). NUMBER OF PERSONS BELONGING TO ABERDEEN AT 31st DECEMBER, 1936, WHO WERE KNOWN TO BE SUFFERING FROM TUBERCULOSIS.

		Number of Known Cases.								Total.
		Under 5	5-10	10-15	15-25	25-35	35-45	45-65	65 upwards	
Pulmonary.										
1. Sputum not present	Males	-	-	-	2	-	-	2	-	4
	Females	-	1	1	3	8	2	1	-	16
2. Sputum present but not examined	Males	-	-	-	-	-	-	-	-	-
	Females	-	-	-	-	-	-	-	-	-
3. Sputum examined & tubercle bacilli found	Males	-	1	-	23	65	47	60	3	199
	Females	-	-	-	27	73	20	13	1	134
4. Sputum examined & tubercle bacilli never found	Males	-	1	1	4	9	11	12	1	39
	Females	-	-	2	7	9	14	7	-	39
	Total:	-	3	4	66	164	94	95	5	431
Non-Pulmonary:										
1. Abdominal ...	Males	4	3	6	1	-	1	-	-	15
	Females	-	2	1	4	2	1	-	-	10
2. Thoracic ...	Males	-	1	3	-	-	-	-	-	4
	Females	-	1	3	-	-	-	-	-	4
3. Spine ...	Males	1	4	4	5	-	-	1	1	16
	Females	2	4	2	1	2	-	1	-	12
4. Bones & Joints (excl. of Spine)	Males	-	3	7	1	6	2	-	-	19
	Females	-	2	9	4	1	2	1	1	20
5. Superficial glands	Males	-	4	2	2	-	-	1	-	9
	Females	3	4	4	10	3	3	1	-	28
6. Lupus	Males	1	-	-	4	2	3	1	1	12
	Females	-	1	1	1	3	2	7	5	20
7. Other parts or organs	Males	1	-	-	1	-	2	6	-	10
	Females	-	-	-	1	1	2	2	-	6
	Total...	12	29	42	35	20	18	21	8	185
Pulmonary and Non-pulmonary	Total...	12	32	46	101	184	112	116	13	616

TABLE X. - (C) NUMBER OF PERSONS WHO DIED FROM TUBERCULOSIS IN ABERDEEN DURING THE YEAR, WITH PARTICULARS AS TO PERIOD ELAPSING BETWEEN NOTIFICATION AND DEATH AND BETWEEN DISCHARGE FROM AN INSTITUTION AND DEATH.

	Pulmonary		Non-pulmonary	
	Males	Females	Males	Females
Number of persons who died from tuberculosis...	41	30	10	6
Of whom -				
Not notified or notified only at or after death	6	4	7	5
Notified less than 1 month before death ...	5	4	1	-
" from 1 to 3 months " " ...	2	2	-	-
" " 3 to 6 " " " ...	1	3	-	1
" " 6 to 12 " " " ...	4	2	-	-
" " 1 to 2 years " " ...	5	2	-	-
" over 2 years " " ...	18	13	2	-
Number who died within 28 days after discharge from an institution	3	3	-	-
Number who died more than 28 days after discharge from an institution	4	7	-	-

Corrected for transferred deaths.

TABLE X. - (D) NUMBER OF CASES WHICH RECEIVED TREATMENT UNDER THE TUBERCULOSIS SCHEME IN SANATORIA OR OTHER INSTITUTIONS DURING THE YEAR ENDED 31st DECEMBER, 1936.

		Number of Patients.					
		In Institutions on Jan. 1.	Admitted during the year.	Discharged during the year.	xDied in Institutions.		In Institutions on Dec. 31.
		1.	2.	3.	4.	5.	6.
Pulmonary.							
xAdults ...	Males	47	66	52	16	5	40
	Females	27	52	41	12	1	25
Children..	Males	1	1	1	-	1	-
	Females	-	-	-	-	-	-
Non-Pulmonary.							
xAdults ...	Males	5	15	13	1	2	4
	Females	4	20	14	1	4	5
Children..	Males	11	16	12	-	4	11
	Females	10	9	11	-	1	7
Total ...		105	179	144	30	18	92

x In column 4 are those who were in final residence 28 days or over. In column 5 are those who were in final residence under 28 days.

x All patients of 15 years and upwards are classed as adults.

Insured Persons. (National Health Insurance Act). Of the 101 cases of pulmonary tuberculosis notified, 61 were insured persons, 46 being male and 15 female. The notified cases of other forms of tuberculosis included 14 insured persons - 3 males and 11 females.

As stated in previous Reports, the Town Council have now assumed full financial responsibility for the treatment of insured tuberculous patients. During the year, the number of prescriptions passed for payment amounted to 1,471.

Food Supply. During 1936, food, chiefly milk, was supplied to an average daily total of 37 patients receiving dispensary or domiciliary treatment.

Supervision of Cases. The Tuberculosis Medical Officer had the assistance of three Tuberculosis Health Visitors or nurses in the visitation and supervision of tuberculous cases throughout the year. The number of visits made by the Tuberculosis Health Visitors during the year under review was 7,661.

Size of House and Density of Occupancy. Table XI. gives the number of cases occurring in houses of different sizes, along with the average number of inmates. In the case of pulmonary tuberculosis, the average number of inmates, including the patient, varied from 3.5 in one-roomed houses to 4.3 in four-roomed houses, and 5.0 in houses of 5 rooms and upwards. The average for houses of all sizes taken together was 4.4.

TABLE XI. - ABERDEEN - TUBERCULOSIS - SIZE OF HOUSE IN RELATION TO NOTIFIED CASES AND REGISTERED DEATHS DURING 1936.

		1 room	2 rooms	3 rooms	4 rooms	5 rooms & up.	Institutional or not stated	Totals for 1936	Corresponding totals for -	
									1935.	1934.
Pulmonary Tuberculosis (Cases)	Male	4	18	16	5	6	13	62	59	61
	Female	8	11	9	3	1	7	39	61	46
Both Sexes ...	Cases	12	29	25	8	7	20	101	120	107
	Deaths	5	20	24	5	7	10	71	71	90
Average Number of Inmates, including Patient		3.5	4.1	5.0	4.3	5.0	...	4.4	4.6	4.3
Other Tuberculosis (Cases)	Male	3	11	7	4	-	1	26	31	23
	Female	..	7	10	2	2	4	25	40	28
Both Sexes ...	Cases	3	18	17	6	2	5	51	71	51
	Deaths	4	4	4	3	-	1	16	28	21
Average Number of Inmates, including Patient		3.3	5.2	4.6	6.5	5.0	...	5.0	4.9	5.1
[x]Houses in City at Census, 1931. Average Number of Inmates		2.5	3.9	4.2	4.1	4.4	...	4.0	...	...

[x] Houses of 25 rooms and over are excluded.

In the cases of other forms of tuberculosis, the average ran from 3.3 for one-roomed houses, to 6.5 for four-roomed houses, and 5.0 for houses of five rooms and upwards. The average for all houses was 5.0.

As regards the position of the tuberculous cases in relation to room and bed accommodation at the time of notification, it was found that of the 101 cases of pulmonary tuberculosis, only 35, or 34.7 per cent. were occupying a separate bed in a separate room, and 14 or 13.8 per cent. had a separate bed but not a separate room. Forty-one, or 41 per cent., had neither a separate bed nor a separate room.

Loan of Beds. In order to facilitate the separation of the patient from the other members of the household, 16 beds or cots, with the necessary bedding, were given on loan to needful patients. On the last day of the year there were on loan 30 beds with bedding.

MATERNITY AND CHILD WELFARE SERVICES.

Infantile Mortality. During the year 1936, there were 214 deaths among children under one year of age, as compared with an average of 270 during the 1931-1935 quinquennium. The infantile mortality rate, expressed as deaths per 1,000 births, was 70 during 1936, which is the lowest rate yet recorded, the lowest one in previous years being 77 in 1934. The average rate during the preceding quinquennium was 86.

The infantile mortality rate throughout Scotland in 1936 was 82 per 1,000 births. Among the four principal towns in Scotland, Aberdeen appears second on the list, Edinburgh being first with a rate of 68. Dundee was third with a rate of 82 and Glasgow fourth with a rate of 109.

The accompanying chart (foll. page 40) shows the infantile mortality rate in Aberdeen as compared with the other three principal towns and all Scotland since 1856. In Aberdeen, for the past 25 years, the outstanding peak occurred in the quinquennium 1911-1915, the infantile mortality rate for 1915 being 173. This very considerable increase was due to the prevalence of measles, whooping cough and pneumonia.

The causes of infantile mortality according to ages is given in Table XII. The mortality in the early weeks of life is largely due to congenital causes and diseases of early infancy, nearly one-half of the deaths in 1936 occurring at ages under one month. The infantile mortality in the various wards of the City is shown in Table XII(a).

Table XIII gives the death-rates among infants from the chief causes per 1,000 births. The diseases of early infancy group comes first with a death-rate of 29 as against an average rate of 32 in the preceding quinquennium. The death-rate from pneumonia and bronchitis showed a decrease as compared with the preceding year and quinquennium, the death-rate in 1936 being 12 as against a rate of 31 in 1935 and an average rate of 23 in the 1931-1935 quinquennium. Among infectious diseases, whooping cough was slightly above the average, the death-rate in 1936 being 5 as against a rate of 1 in the preceding year and an average rate of 4 in the 1931-1935 quinquennium.

In Table XIII two interesting columns show the number of infants surviving at the end of one year from birth, and the proportions which the survivors bear to the population. This rate, which represents the net gain to the population after the perils peculiar to the first year of life have been passed, was, in 1936, 16.0 per 1,000 of population, as compared with an average of 16.7 for the preceding quinquennium, or 17.2 for the ten years 1926-1935. This rate is a more exact indication than the birth-rate of the real internal addition to the population.

Mortality at Pre-School Period (1 to 5 years) At this age period, there was also a decrease in the number of deaths as compared with the preceding quinquennium, there being 77 deaths in 1936 as against an average of 92. Deaths from respiratory diseases, whooping cough and diphtheria were the same as the average. There was 1 death from measles in 1936 as against an annual average of 7. It has to be noted that in 1936 there were 8 deaths of children under 3 years of age due to burns and scalds, as against an annual average of 3 deaths in the preceding quinquennium.

Maternal Mortality. During the year under review, there were 17 deaths of women from causes associated with pregnancy or child-birth, including all deaths, whatever the precise cause, within four weeks after child-birth (or later if illness arose as a result of confinement). Of these 17 deaths, 12 were classified by the Registrar-General as due to pregnancy and child-birth.

All these deaths were inquired into by the Health Visitors or information regarding them was obtained from the attending practitioners who have always readily co-operated in giving the desired information.

It will be seen from the following Table that during 1936 there were 5.6 maternal deaths per 1,000 births; of which 3.9 were classified by the Registrar-General as due to pregnancy and child-birth, including 2.3 from sepsis. In the quinquennium 1931-1935, the corresponding rates were 5.9; 4.6; and 2.5.

Year.	No. of Births (Corrected for Transfers)	Maternal Mortality.					
		Total Number of Deaths.	Rate per 1,000 Births.	Classified to all Puerperal Conditions	Rate per 1,000 Births	Classified to Puerperal Sepsis.	Rate per 1,000 Births.
1936	3,048	17	5.6	12	3.9	7	2.3
1935	3,157	19	6.0	12	3.8	7	2.2
1934	3,071	16	5.2	10	3.3	6	2.0
1933	3,019	20	6.6	16	5.3	6	2.0
1932	3,188	25	7.8	24	7.5	14	4.4
1931	3,231	13	4.0	10	3.1	6	1.9
verage 931-1935	3,133	19	5.9	14	4.6	8	2.5

There were 3 deaths among confinements attended primarily by midwives, but subsequently sent to a public institution. In 8 cases, the confinement was attended by a doctor in the patient's own home, but of these, 2 were subsequently sent to a public institution for delivery. In 3 cases, the confinement was attended by doctors in maternity homes. In 2 cases, the attendance was by public institutions, and the remaining case (an abortion) was not attended.

One death was due to ectopic gestation. In 4 cases, death followed abortion. In 5 others, delivery took place prematurely, and in 1 case death occurred during delivery. The remaining 6 deaths followed full-time deliveries. In 6 cases, the patients were delivered in their own homes, and of these 4 were abortions.

Treatment of Puerperal Fever and Puerperal Pyrexia.

The following table gives various particulars relating to the number of cases notified:-

		Puerperal Fever.	Puerperal Pyrexia.
1.	No. of cases notified	* 68$^{(13)}$	26$^{(7)}$
2.	No. of deaths	7	3$^{(1)}$
3.	No. receiving institutional treatment:-		
	City (Fever) Hospital	68$^{(13)}$	15$^{(5)}$
	Other Institutions.	-	7$^{(2)}$
4.	No. retained at home.	-	4
5.	No. of cases following instrumental delivery	22	3
6.	No. of deaths occurring under heading (5)	2	1
7.	No. of cases following abortion	13	2
8.	No. of deaths following abortion... ...	4	-

* Figures within brackets relate to mothers ordinarily residing outside Aberdeen but resident temporarily in the City for the purpose of confinement.

From the information given under headings (1) and (3) it will be seen that, of the 68 cases of puerperal fever notified, all were removed to the puerperal wards of the City Hospital, and that, of the 26 cases of puerperal pyrexia/

pyrexia notified, 15 were admitted to the City Hospital. No deaths from these diseases occurred at home. It may also be noted that sepsis followed abortion in 13 cases, 4 of which proved fatal.

Attendance at Birth.

With regard to attendance at birth in notified cases of puerperal fever and pyrexia, the following statement is submitted:-

	Puerperal Fever.		Puerperal Pyrexia.	
	Cases.	Deaths.	Cases.	Deaths.
Doctors	23	6	9	1
Midwives alone	-	-	1	-
Midwives calling Doctors	2	-	1	-
Public Institutions	41	-	14	2
No skilled attendance (abortion)	2	1	1	-
	68	7	26	3

Report under Midwives (Scotland) Act, 1915. The report for the year 1936 under the Midwives (Scotland) Act, 1915, has already been transmitted to the Central Midwives Board.

The number of Midwives who, during the year, intimated their intention to practise in the district was 11.

Births. The figures of the births registered in Aberdeen during 1936 are analysed in detail in Chapter V. of this Report.

The particulars regarding the live-births and still-births occurring during the year are as follows:-

	No. of Live Births.	No. of Still Births.	No. of Still Births per 1,000 Live Births.
Midwives	524	29	55.3
Maternity Hospital -			
(a) In Wards	728	78	107.1
(b) At Home	248	13	52.4
Medical Practitioners...	1725	59	34.2
Not attended at birth...	1	-	-
	3226	179	55.5

The bodies of 38 still-born children or children who had died soon after birth were examined for spirochetes. None proved to be syphilitic.

Home Visitation: A record of the number of first visits and re-visits to infants under 1 year of age, to children in the 1-5 year period, and to expectant mothers, is here submitted:-

Infants under one year.				Children one to five years.				Ante-natal Cases.	
First Visits.		Re-Visits.		First Visits.		Re-Visits.		First visits.	Re-visits.
egit.	Illegit.	Legit.	Illegit.	Legit.	Illegit.	Legit.	Illegit.		
2,681	162	30,573	2,194	961	76	10,479	646	235	192
2,843		32,767		1,037		11,125		427	
35,610				12,162					

Voluntary Health Visitors' Report. The Voluntary Health Visitors' Report, which is submitted separately, indicates the valuable contribution that is made to the work of Maternity and Child Welfare by the voluntary workers.

Ante-natal Consultations. The extent of the ante-natal work undertaken during the year is summarised as follows:-

	Woodend Hosp. Ante-natal Clinic.	Maternity Hosp. Ante-natal Annexe.	City Hosp. Ante-natal Clinic.	Child Welfare Clinics.
			x . X	
Total No. of Attendances ...	188	3,751	422 + 37 + 25	334
Total First Attendances ...	27	1,020	216 + 27 + 15	265

x Post-natal cases.

X Not pregnant.

Post-natal and other Consultations. There were 1,860 post-natal consultations during the year, of which 800 were first attendances.

Child Welfare Consultations. The extent of the work done at the Child Welfare Clinics is summarised as follows:-

(a) Total number of attendances -	(1) Under 1 year of age ...	6146
	(2) Over 1 year of age ...	2722
(b) Number of first attendances -	(1) Under 1 year of age ...	1781
	(2) Over 1 year of age ...	1328

Special Treatment Centres.

(1) Teeth: The Dental Clinic provided the following services:-

(a) No. of Attendances - (1) Mothers 310 (258 cases)
(2) Children 674 (644 cases)

(b) Classified summary of conditions remedied:-

	Extractions.	General Anaesthetics.	Anaesthetic (local)	Fillings.	Scalings.
(1) Mothers...	1824	309	1	0	0
(2) Children..	2492	670	3	0	0

(c) Number of Dentures supplied ... Nil.

(d) Net cost of Dentures, less sums recovered ... Nil.

(2) Eyes: The Ophthalmic Clinic was utilised to the extent of providing treatment for 49 cases of strabismus.

(3) Ultra-Violet Light Clinic: (Duration of Clinic 6 months). Children under 5 years of age treated at City Hospital:-

Disease.	Cured.	Improved.	Stationary.	Worse.	TOTAL.
Rickets	-	1	-	-	1
Wasting & Debility	-	25	-	-	25
Adenopathy	3	-	-	-	3
Total ...	3	26	-	-	29

90 per cent. improved; 10 per cent. cured.

Day Nursery.

The Day Nursery at Charlotte Street undertakes the main work under this heading, and there is, in addition, a Play Centre at the Castlegate Child Welfare Centre, which is open daily from 2 to 5 p.m. The attendances and charges at the Charlotte Street Day Nursery are as follows:-

(a) Total Number of Attendances --- 6,181

Fresh Admissions (1) Under 1 year - 32

(2) Over 1 year - 56

Average Daily Attendance - 22.

(b) The Charges made are as follows:-

5d. per day for one child.

9d. per day for two children.

1/- per day for three children.

(c) The receipts for the year amounted to £124.

Food and Milk.

During the year, milk was supplied to the following extent:-

MOTHERS:	(1) Nursing	82	
	(2) Expectant	8)...	90
CHILDREN:	(1) Under 1 year. ...	159	
	(2) Over 1 year. ...	54)...	213

Ophthalmia Neonatorum.

Ophthalmia Neonatorum is referred to in the Sections of this Report dealing with infectious and venereal diseases. The following additional information is submitted:-

Year.	Number of Registered Births.	Number of Notified Cases of Ophthalmia Neonatorum	Rate per 1,000 Registered Births.
1936.	3,230	90	27.9
Average 1931-35	3,277	76	23.2

Confinement Attended by:-	Case Notified by:-			
	Doctor	Midwife	Institution.	Health Visitor.
Doctor	5	0	0	10
Midwife	0	23	1	10
Mat. Hospital ...	3	0	8	12
Mat. District ...	4	0	9	5

Number of cases in which infection was gonococcal -- 5.
Eleven cases were treated in residential institutions; forty-seven as out-patients in other institutions; and thirty-two cases were treated at home.

In eighty-nine cases a complete cure was obtained.
In one case there was a slight impairment of vision in one eye.

Maternity Hospital.

1./

Maternity Hospital.

1. Pre-Natal Cases:-

(a) Number of cases treated in wards ...	285
(b) Number of deaths	2

2. Abortions:-

Abortions are not now admitted.

3. and 4. Number of Confinements:-

(a) In Wards	795
(b) In District	257

Number of Deaths:

(a) In Wards	5
(b) In District	0

5. Number of Infants born:-

	In Wards.	In District.
(1) Alive	728	248
(2) Still	78	13
6. Number of deaths of Infants within 10 days	30	4

Woodend (Municipal) Hospital.

1. Pre-Natal Cases:-

(a) Number of cases treated	8
(b) Number of deaths	0

2. Abortions:-

(a) Number of cases of abortion	0
(b) Number of deaths	0

3. Normal Confinements:-

(a) Total Number	(i) with medical attendance ...	48
	(ii) without medical attendance...	0
(b) Number of deaths		0

4. Abnormal or complicated confinements:-

(a) Total Number	(i) instrumental deliveries ...	3
	(ii) other deliveries	18
(b) Number of deaths		0

5. Number of Infants born -

(1) Alive	68
(2) Still	3

6. Number of Deaths of Infants within 10 days	0

Maternity Homes (Private):

1. Pre-Natal Cases:-

(a) Number of cases treated	5
(b) Number of deaths	0

2. Abortions:-

(a) Number of cases of abortion	5
(b) Number of deaths	1

3./

3. Normal Confinements:-

(a) Total Number	(i) with medical attendance ...	194
	(ii) without medical attendance...	0
(b) Number of deaths	... ...	1

4. Abnormal or complicated confinements:-

(a) Total Number	(i) instrumental deliveries ...	95
	(ii) other deliveries	63
(b) Number of Deaths	... ...	2

5. Number of Infants born-

(1) Alive	342
(2) Still	12

6. Number of deaths of infants within 10 days.. 5

Homes for Unmarried Mothers before and after Confinement.

Unmarried mothers in their second or subsequent pregnancies are admitted to Loch Street Home. Unmarried mothers in their first pregnancy are admitted to Thorngrove Home. A total of 5 unmarried mothers was admitted to Loch Street Home, and 13 unmarried mothers to Thorngrove Home.

Hospitals for Sick Children.

The Marasmus Ward at the City (Fever) Hospital provides 22 cots for infants suffering chiefly from nutritional disorders. During the year, a total of 139 infants was admitted to this ward, including transfers from other wards.

A Ward at Woodend Hospital provides 14 cots for infants suffering chiefly from rickets and orthopaedic disabilities. In all, a total of 14 cases was admitted during the year.

Convalescent Homes.

Number of cases treated:-

	Thorngrove Home.	Loch Street Home.
Mothers	186	5
Children under 1 year..	291	3
Children over 1 year..	29	41
	506	49

Average duration of residence

Mothers	3 days.	22 days.
Children	53 days.	44 days.

Home-Helps.

25 Home-Helps were employed in the homes, average period of assistance, 27 days: Cost	£ 42. 15. 8
18 Home-Helps were employed for washing: average number of washings per patient - 3: Cost	9. 19. 6.
Total Cost ...	£ 52. 15. 2.

Infant Mortality Rate, 1856-1936.—Quinquennial Averages.

Deaths under 1 year per 1,000 Births.

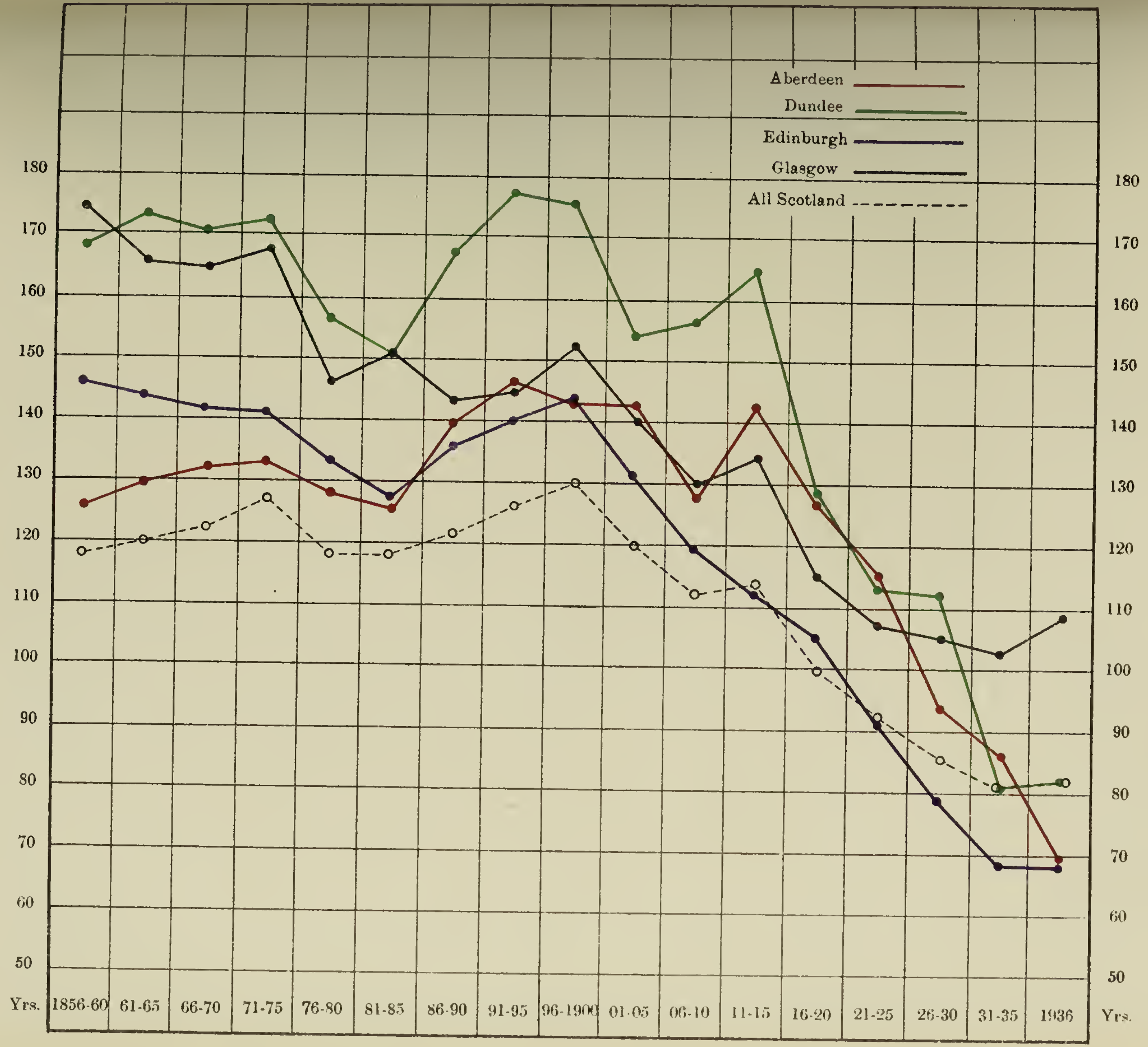


TABLE XII. - CAUSES OF DEATH AMONG CHILDREN UNDER FIVE YEARS OF AGE. - YEAR 1936.

Causes of Death.	A G E.																	Average for Preceding 5 years. 1931-35.	
	First Year.												Second to Fifth Years						
	First Four Weeks.				First Three Months			The Four Quarters											
	0-1	-2	-3	-4	*0-1	-2	-3	*0-3	-6	-9	-12	Total	-2	-3	-4	-5	Total	0-1	1-5
Chickenpox ...																			-
Measles ...										1	2	3	1				1	6	7
Scarlet Fever ...												-		2	1		3	1	2
Whooping Cough ...					1	2	1	4	5	5	2	16	6	1		2	9	11	9
Diphtheria ...									1		2	3	2	2		3	7	0.4	7
Erysipelas ...					1			1		1		2					-	1	0.2
Epidemic Cerebro-Spinal Meningitis						1		1	1			2					-	1	1
Tuberculosis of - (a) Brain...												-	2				2	2.6	5
(b) Abdomen.												-	1				1	1	2
(c) Lungs...												-					-	0.6	2
(d) Other forms									1			1		1			1	0.6	2
Meningitis ...									1	1		2	1		1	1	3	3	1
Hydrocephalus ...												-					-	0.2	0.2
Convulsions ...	1			1	2	3	3	8	2	2	2	14					-	10	1
Pneumonia ...	1			1	2	3	2	7	10	8	6	31	20	1	1	1	23	54	24
Bronchitis ...			1		1	1	1	3		3		6	2				2	19	2
Diarrhoea & Enteritis						1	1	2	6	3		11	1		1		2	13	2
Other Digestive Diseases			1		1			1	3	1	1	6	1		1	1	3	2.6	5
Cong. Malformation of Heart	4	1	1	1	7			7				7			1		1	4	0.4
Other Cong. Malformations	1	1	1		3		1	4	3			7	1				1	8	0.4
Prematurity ...	49		2	6	57	2		59				59					-	65	0.2
Atrophy, Debility & Marasmus	6				7	1	2	10	4	2		16					-	28	0.6
Atelectasis ...	8		1		9			9				9					-	8	-
Injury at Birth ...	4	1			5			5				5					-	8	-
Syphilis ...												-					-	1	0.2
Burns and Scalds...												-	5	3			8	0.6	3
Suffocation ...						1		1				1					-	3	0.2
Other Accidents												-				1	1	0.6	5
Other Causes ...	3				3		1	4	3	5	1	13	6	2		1	9	17	10
All Causes ...	77	3	7	9	99	15	12	126	40	32	16	214	49	12	6	10	77	270	92
Average for Preceding 5 years.	79	11	16	9	118	27	18	163	44	35	28	270	45	19	14	14	92		

x This column includes all deaths in preceding columns.

CITY OF ABERDEEN.

TABLE XII(a). - INFANTILE MORTALITY in WARDS of the CITY. - YEAR 1936.

	Whole City.	Ward of City.											
		Woodside	St. Machar	St. Clement's	Greyfriars	St. Nicholas	Gilcomston	Rosemount	Rubislaw	Ruthrieston	Holburn	Ferryhill	Torry
Number of Births.	3,048	266	431	445	430	173	182	158	89	158	174	191	351
	Percentage of total =	9%	14%	15%	14%	6%	6%	5%	3%	5%	6%	6%	11%
Number of Deaths under 1 year	214(20)	16(2)	33(3)	35(3)	44(5)	9(2)	18(2)	7(1)	6	11	6	8(1)	21(1)
	Percentage of total =	7%	15%	16%	21%	4%	8%	3%	3%	5%	3%	4%	10%
Infantile Mortality Rate (per 1,000 Births)	70	60	77	79	102	52	99	44	67	70	34	42	60
Causes of Death:-													
Infectious Diseases	24(1)	1	4	4(1)	5	1	2	1	-	-	1	2	3
Tuberculosis	1	-	-	-	-	-	-	-	-	-	1	-	-
Diseases of Early Infancy	105(10)	12(1)	17(2)	13(1)	18(3)	4(1)	8	3(1)	3	7	3	4(1)	13
Pneumonia, Bronchitis, etc.	42 (5)	3(1)	7(1)	5	15(2)	2 (1)	3	2	1	1	-	1	2
Diarrhoea, Enteritis, etc.	17(2)	-	1	4	5	2	2(1)	1	-	1	-	-	1(1)
Other Causes	25(2)	-	4	9(1)	1	-	3(1)	-	2	2	1	1	2

Of above 214 deaths, 20 or 9 per cent. occurred among illegitimate children. The numbers are denoted in brackets.

TABLE XIII. - ABERDEEN - INFANT MORTALITY. - Years 1926-1936.

Year.	No. of Births.	Births per 1,000 of Population.	Deaths of Infants under 1 year.	Deaths of Infants under 1 year per 1,000 Births	No. of Survivors.	Survivors per 1,000 of Population.	Death-Rates among Children Under 1 year of Age from Chief Causes per 1,000 Births.										Death-Rates from All Causes, per 1,000 Births, at Ages --		
										Common Zymotic Diseases.									
							Prematurity, Congenital Defects and Diseases of Early Infancy.	Diseases of Digest. Sys. Wasting and Debility, Convulsions.	Bronchitis & Pneumonia.	Measles.	Whooping Cough.	Diphtheria.	Scarlet Fever.	Tuberculosis.	Syphilis.	Suffocation.	Under 2 Weeks	Above 2 Weeks and Under 6 Months	Above 6 Months and Under 1 Year.
1936	3048	17.2	214	70	2834	16.0	29	15	12	1	5	1	0	0.3	0	0.3	26	28	15
1935	3157	18.0	286	91	2871	16.4	31	12	31	3	1	0.3	0.3	1	0.6	1	23	38	25
1934	3071	17.7	235	77	2836	16.3	33	19	15	0	3	0	0.3	0.7	0	0.7	30	34	13
1933	3019	17.6	238	79	2781	16.2	30	19	20	1	2	0	0	0.7	0	1	28	33	18
1932	3188	18.7	296	93	2892	17.0	33	18	22	4	7	0.3	0	2	0.6	1	29	41	23
1931	3231	19.2	292	90	2939	17.4	31	17	27	2	5	0	0.6	3	0	0.6	29	41	20
Aver. 1931-35	3133	18.2	269	85	2864	16.7	32	17	23	2	4	0.1	0.2	1.5	0.2	0.9	29	37	20
1930	3303	19.7	265	80	3038	18.1	24	18	21	3	3	0.3	0	1	0	2	23	38	19
1929	3112	18.7	297	95	2815	16.9	31	27	24	0	2	1	0	3	0.3	2	31	41	23
1928	3314	19.9	313	94	2999	18.1	27	29	17	6	5	0.3	0	2	0.3	2	30	40	24
1927	3182	19.3	334	105	2848	17.3	38	29	25	0.3	2	0	0	3	2	1	40	45	20
1926	3406	20.7	328	96	3078	18.7	30	31	17	2	3	1	0	4	1	1	27	44	25
Aver. 1926-30	3263	19.7	307	94	2956	17.8	30	27	21	2.3	3	0.5	0	3	0.7	2	30	42	22
Aver. 1926-35	3198	19.0	288	90	2910	17.2	31	22	22	2	3	0.3	0.1	2	1	1	30	39	21

VENEREAL DISEASES SERVICES.

New Cases.

During 1936, a total of 1,164 new cases from all areas (including those within the Joint Scheme and Outside Areas) attended for treatment at the Treatment Centres which are situated at the Aberdeen Royal Infirmary and at the Aberdeen City Hospital. Of these, 814 were cases from the City of Aberdeen. In the 1931-1935 quinquennium, the average annual number of new cases was 1,084, including 785 City cases.

In addition to the 1,164 new cases in 1936, 1,401 cases who had not completed their treatment, were carried forward from the previous year. During the year, therefore, 2,565 cases were under treatment.

In Table XIV the new cases are divided into the various classifications.

As stated in the Annual Report for 1935, the number of cases of early infections has been showing a definite increase within the last few years, especially at the adolescent ages. Following a Report to the Town Council in May, 1936, on the Incidence of Venereal Diseases in the North-Eastern area, a series of lectures was conducted last winter under the auspices of the British Social Hygiene Council.

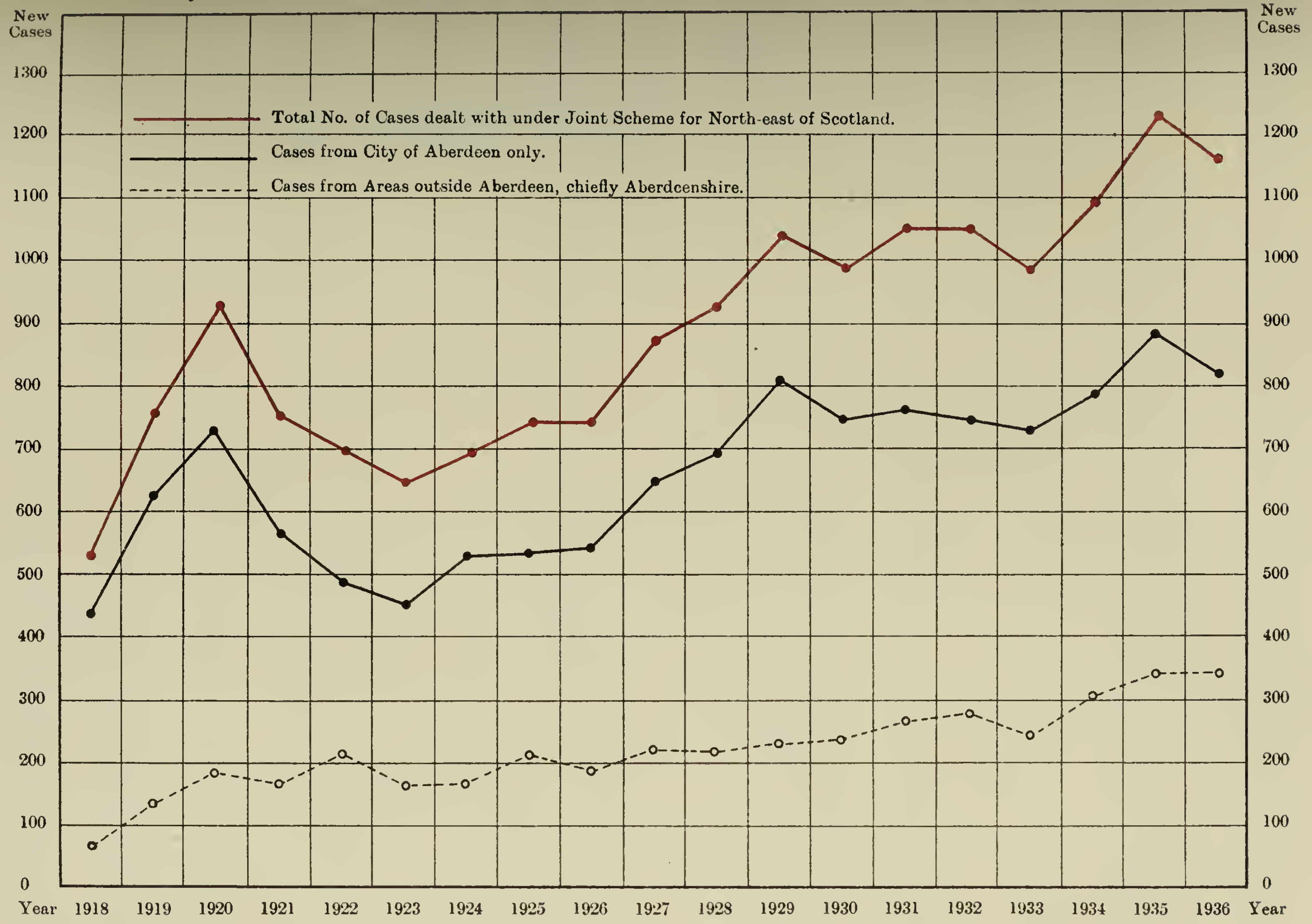
The accompanying chart and table indicate the general trend of the occurrence of venereal infections in the area, and also show the incidence in the City of Aberdeen alone.

Incidence of Venereal Diseases in the City of Aberdeen and in Other Areas: Years 1918-1936.

Year.	Total No. of Cases.	Aberdeen City.	Other Areas.
1918	516	445	71
1919	757	621	136
1920	919	737	182
1921	744	572	172
1922	699	491	208
1923	634	468	166
1924	693	528	165
1925	738	534	204
1926	737	542	195
1927	872	649	223
1928	910	693	217
1929	1037	802	235
1930	986	745	241
1931	1040	769	271
1932	1042	754	288
1933	979	731	248
1934	1091	790	301
1935	1226	880	346
1936	1164	814	350

VENEREAL DISEASES

Yearly Numbers of New Cases at Aberdeen Royal Infirmary and City Hospital Treatment Centres.



As regards Aberdeen City, the post-War peak of 1920, with 737 new cases, was followed by a decline continuing until 1923, with 468 new cases; but thereafter, a more or less steadily increasing incidence occurred up to 1935, when there was a total of 880 new cases. An additional 346 cases from other areas within the Joint Scheme brings the total dealt with at the Treatment Centres in Aberdeen to 1,226 new cases in 1935. There has been a slight decrease in 1936, as compared with 1935, the total cases, as already stated, being 1,164, including 814 City cases.

The following three reasons account in some measure for the increase in incidence in recent years:-

(1) There is a growing demand for information by lay bodies with regard to the causation of venereal disease, and the public are gradually awakening to the fact that venereal infections rank among the foremost of modern medical and sociological problems.

(2) There is an increasing extension of facilities for treatment, especially in connection with the times of attendance suitable for those who cannot attend during working hours.

(3) The third reason must be accepted that there is an actual increase in the prevalence of the disease. The sudden increase from 48 new cases of early syphilis in 1934 to 114 cases in 1935 and 150 in 1936 cannot be otherwise explained.

Of the total 814 new cases from the City of Aberdeen in 1936, 727 were actually venereally infected; the remaining 87 - though exposed to the risk of infection - were ultimately diagnosed as being non-venereal. The actual incidence, however, must be considerably greater than 727. There are, for example, those who were treated privately, and probably a still greater number who have not been treated at all.

Attendances for Treatment.

As will be seen from Table XV., the total number of attendances of cases from all areas at both Centres during 1936 was 53,712, as against an average of 47,977 in the preceding quinquennium.

For the City of Aberdeen, there were 47,261 attendances during 1936, being 5,618 more than the average for the quinquennium 1931-1935.

In-Patients.

Table XVI. shows the number of cases dealt with in hospital.

During the year, 106 cases from all areas were admitted for in-patient treatment, 87 being admitted to the Royal Infirmary and 19 to the City Hospital. The average number admitted during the 1931-1935 quinquennium was 132.

A total of 35 cases was admitted from the City - 30 to the Royal Infirmary and 5 to the City Hospital. The average number admitted during the preceding quinquennium was 56.

The reason for the smaller number of admissions in 1936 as compared with the preceding quinquennium is that in the year under review the period of stay in hospital was longer than in preceding years.

Laboratory Examinations.

During 1935, the serological and bacteriological services carried on under the Joint Scheme at the Royal Infirmary were transferred to the City Hospital.

From Table XVII. it will be seen that 19,844 examinations were carried out during 1936, including 15,004 for the City of Aberdeen, as compared with 16,519 and 14,407 respectively in 1935.

The bodies of 38 still-born children, or children who had died soon after birth, were examined for spirochetes. None proved to be syphilitic.

Ophthalmia Neonatorum.

A total of 90 cases was reported during 1936, as against an average annual number of 67 during the preceding ten years. In 1936 the infection was proved to be gonococcal in 5 cases.

VENEREAL DISEASES SERVICES.

JOINT SCHEME FOR TREATMENT OF VENEREAL DISEASES IN CITY OF ABERDEEN AND NORTH-EASTERN COUNTIES.

Treatment Centres at Aberdeen Royal Infirmary and City Hospital.

TABLE XIV. - NUMBER OF NEW CASES.

(A) From All Areas. (B) From City of Aberdeen.

Area.	Year.	Treatment Centre.	Total.	Syphilis.		Gonorrhoea.		Soft Chancre.		N.S.V.D.		Conditions other than Venereal.	
				M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.	1936.	Royal Infirmary...	890	159	83	326	58	19	-	92	56	75	22
		City Hospital ...	274	43	34	106	25	2	-	22	22	11	9
		Both Centres ...	1164	202	117	432	83	21	-	114	78	86	31
	Average 1931-35	do.	1084	159	83	438	83	16	0.2	89	42	111	63
B.	1936.	Royal Infirmary...	596	113	64	202	33	8	-	66	41	53	16
		City Hospital ...	218	38	30	74	22	-	-	19	17	10	8
		Both Centres ...	814	151	94	276	55	8	-	85	58	63	24
	Average 1931-35	do.	785	107	60	321	62	10	0.2	69	31	78	47

VENEREAL DISEASES SERVICES.

TABLE XV. - ATTENDANCES AT TREATMENT CENTRES.

(A) From All Areas. (B) From City of Aberdeen.

Area.	Year.	Treatment Centre.	Total.	Syphilis.		Gonorrhoea.		Soft Chancre.		N.S.V.D.		Conditions other than Venereal.	
				M.	F.	M.	F.	M.	F.	M.	F.	M.	F
A.	1936.	Royal Infirmary...	40,517	9097	6103	16835	5731	76	...	322	1882	118	353
		City Hospital ...	13,195	1790	1221	8756	1180	15	-	60	131	25	17
		Both Centres ...	53,712	10,887	7324	25,591	6911	91	-	382	2013	143	370
	Average 1931-35	do.	47,977	8,775	6,478	24,170	5,912	78	0.2	675	1,428	207	254
B.	1936.	Royal Infirmary...	34,592	7431	5100	15535	4309	41	-	266	1487	92	331
		City Hospital ...	12,669	1719	1187	8410	1148	-	-	40	126	23	16
		Both Centres ...	47,261	9,150	6,287	23,945	5,457	41	-	306	1,613	115	347
	Average 1931-35	do.	41,643	6,851	4,944	22,136	5,419	62	0.2	595	1,264	153	218

VENEREAL DISEASES SERVICES.

TABLE XVI. - IN-PATIENT CASES.

(A) From All Areas. (B) From City of Aberdeen.

Area.	Year.	Treatment Centre	Total.	Syphilis.		Gonorrhoea.		Soft Chancre.		N.S.V.D.		Conditions other than Venereal.	
				M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.	1936	Royal Infirmary...	87	21	20	22	15	2	-	1	4	2	-
		City Hospital ...	19	2	1	14	1	-	-	-	1	-	-
		Both Centres ...	106	23	21	36	16	2	-	1	5	2	-
	Average 1931-35	do.	132	35	24	44	20	1	-	2	4	1	0.4
B.	1936	Royal Infirmary...	30	8	11	5	3	-	-	-	2	1	-
		City Hospital ...	5	2	1	2	-	-	-	-	-	-	-
		Both Centres ...	35	10	12	7	3	-	-	-	2	1	-
	Average 1931-35	do.	56	15	12	17	9	1	-	1	1	0.4	0.4

VENEREAL DISEASES SERVICES.

TABLE XVII. - LABORATORY EXAMINATIONS.

(A) From All Areas.   (B) From City of Aberdeen.

Area.	Year.	Total Exams.	Syphilis.				Gonorrhoea.	
			Wassermann & Kahn		Spirochete		Gonococcus.	
			Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
A.	1936	19,844	3718	10,452	95	51	1011	4517
B.	1936	15,004	2856	8,097	85	48	711	3207

BLIND PERSONS SERVICES.

In terms of Section 2 (1) of the Blind Persons Act, 1920, a Scheme was drawn up by the Town Council and approved by the Department of Health on 31st January, 1935. The functions of the Council under the Blind Persons Act, 1920 (other than those relating to technical education) are carried out by the Public Health Committee of the Council, subject to the provisions of the Administrative Scheme under the Local Government (Scotland) Act, 1929, drawn up by the Council.

In this connection, the following statement, with particulars relating to the year ended 31st March, 1937, shows the arrangements made in terms of the approved Scheme. This annual period is that adopted by the Department of Health for statistical purposes.

Children below five years of age:

In the case of any such children whose natural guardians are incapable of properly undertaking their care, the Council has agreed to arrange, where necessary or desirable, for their admission to the Royal Blind Asylum and School, Edinburgh, or other similar Institution, on terms to be arranged with the Institution, or for their boarding out with suitable guardians.

There were no certified blind children in this age group at 31st March, 1937.

Maintenance during Technical Education.

The Council has arranged to pay a maintenance allowance of 15s. to 25s. per week in respect of each blind person undergoing a course of technical education at the Aberdeen Asylum for the Blind.

At 31st March, 1937, 13 persons - 8 males and 5 females - were receiving assistance towards their maintenance during the period of technical training; 12 in the Aberdeen Asylum for the Blind and 1 at the Royal Blind Asylum, Edinburgh.

Workshop Employment.

The Council has arranged to make a contribution of £40 per annum to the Asylum in respect of each trained blind person employed in the workshops of the Institution, and has arranged to pay £20 per annum in respect of each pensioner formerly employed at the Asylum.

A contribution of £650 was made by the Council towards the cost of certain extensions - including new workshops - at the Asylum.

The number of persons employed in the Blind Asylum Workshops was 58 - 41 males and 17 females.

The number of pensioners - blind persons formerly employed at the Asylum - was 12 - 8 males and 4 females.

Home Workers.

The Council has arranged for the employment of approved blind persons under the Scheme of Assistance to Home Workers approved by the Council and carried on by the Aberdeen Town and County Association for Teaching the Blind at their Homes, and has agreed to make a contribution to the Association at a rate of £8 per annum in respect of each blind person so employed.

Of the 7 persons employed outwith the Blind Asylum, 3 were employed under the Home Workers' Scheme, including 1 employed in Edinburgh, in respect of whom a contribution was made to Edinburgh Outdoor Association.

The occupations are as follows:-

	Male.	Female.
Basket Maker	1 (HW)	-
Hawkers	1	-
Masseur	1	-
Piano Tuner	1 (HW)	-
Pianist, etc.	1 (HW)	1
Teacher (Home)	1	-
	6	1

Profession or Business.

The Council has agreed to grant assistance to approved blind persons towards setting them up in a profession or business, the amount of such assistance to be determined according to the special circumstances in each case, by agreement, or after consultation with the Asylum or Association.

No application for assistance was received during the year under review.

Home Teaching, etc.

The Council has arranged with the Association for the care and assistance of blind persons outwith Institutions for the Blind, including the provision of home teaching, instruction in simple occupations, and visitations. In respect of the provision of these services, the Council has agreed to make a contribution to the Association not exceeding £1. 8/- per head of the blind persons on the roll of the Association ordinarily resident in the burgh. This rate will be reviewed annually.

This contribution is made on condition that no person shall be employed as a home teacher unless he or she has gained, or gains within two years of the date of his or her appointment, the Home Teaching Certificate of the College of Teachers of the Blind.

The number of blind persons on the roll of the Association at 31st March, 1937, was 195.

Registration.

The Council has set up and will maintain a register of blind persons ordinarily resident in the Burgh.

Register of the Blind as at 31st March, 1937.

Numbers according to Different Age-Groups of all Blind Persons on the Register.

0-2		3-4		5-15		16-17		18-29		30-39		40-49		50-69		70 +		Total.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	T.
-	-	-	-	3	-	4	-	18	16	17	20	23	9	53	55	27	40	145	140	285

Certification.

The Council, in August 1931, set up a Regional Blind Persons Clinic for the City of Aberdeen and the Counties of Aberdeen and Kincardine. Sub-clinics now function in Banffshire, Orkney and Shetland. The examinations at the central clinic are made by two ophthalmic surgeons; at the sub-clinics only one ophthalmic surgeon is in attendance. Those who are unable to attend personally at the clinic on account of physical reasons, are visited at their homes by one of the ophthalmic surgeons.

The Work of the Regional Clinic.

During the year ended 31st March, 1937, there were examined for the first/

first time, a total of 61 persons - 46 at the clinic and 15 at home. In addition, 30 persons underwent re-examination, making a total of 91 cases examined.

The details of these examinations are as follows:-

	No. examined for first time.		Re-examinations.	Total.
	At Clinic.	Domiciliary.		
City of Aberdeen ...	34	7	23	64
County of Aberdeen..	11	5	7	23
County of Kincardine	1	3	-	4
	46	15	30	91

Of the 61 applicants examined, 33 or 54 per cent., were certified blind within the meaning of the Act; 22 of these cases belonged to the City of Aberdeen.

Since the inauguration of the Clinic, 750 first examinations, and 173 re-examinations have been carried out. The numbers for examination have gradually diminished, so that it is no longer necessary to hold the clinic weekly, as was first arranged.

The cost of the Clinic is apportioned amongst the three local authorities according to the numbers attending from each area.

National Services.

(1) Printing of Music and Literature.

The Council has agreed to make a contribution of £11. 10. 6. per annum to the Royal Blind Asylum, Edinburgh.

(2) Home Teachers' Examination.

The Council has agreed to make a contribution to the College of Teachers of the Blind, London, of 10s. in respect of each person in the Burgh making application to undergo the Home Teachers' Examination of the College.

(3) Circulation of Music and Literature.

The Council has agreed to make an annual grant of not less than £5 to the National Library for the Blind, London.

Domiciliary Assistance to Necessitous Blind Persons.

Procedure as to Applications and Payments.

1. Applications for assistance should be made to the Medical Officer of Health, who causes investigation to be made as to the circumstances of the applicant and reports to the Public Health Committee. If the granting of assistance is approved by that Committee and the Town Council, the appropriate payments are made by the City Chamberlain weekly, or at other intervals, if specially instructed, in particular cases.

Conditions of Domiciliary Assistance.

2. The foregoing assistance is given subject to the following conditions:-

(a) The applicant must be certified as blind under the arrangements made for the certification of blind persons, in terms of the Council's Scheme for the Administration of the Blind Persons Act, 1920.

(b) The applicant must have ordinarily resided in the City for a period of at least three years prior to the date of application for assistance; provided that, where the applicant has not been ordinarily resident in the City for three years, he shall be granted such assistance within the scale set forth in paragraph 5 as the Committee and the Council may decide, having regard to the circumstances of the case.

(c) The applicant being trainable or employable, shall not refuse training or employment when offered.

(d) The applicant must not appeal for alms, nor beg, nor act as a street musician in the City or elsewhere while in receipt of a grant.

(e) The applicant must, if and when required -

- (i) Undergo a course of technical education.
- (ii) Undergo re-examination of eyesight.
- (iii) Accept ophthalmic treatment which may lead to improved vision.

(f) The applicant must give such information as to his or her means as may be required from time to time by the Medical Officer of Health.

Calculation of Existing Means.

3. The method followed in calculating the value of existing means in connection with this Scheme is generally that adopted in the award of pensions under the Old Age Pensions Acts.

Periodical Review of Cases.

4. All cases assisted under these arrangements are subjected to a detailed review at regular intervals.

Amount of Allowances.

5. The payment by the Town Council to necessitous blind persons is such sum per week as may be necessary to provide minimum total subsistence as follows:-

(1) Single person, 21 years of age and over, living alone or in lodgings	£1. 5. 0.
(2) Blind couple, married before the date of Scheme coming into operation	£2. 0. 0.
(3) Blind couple, married after the date of Scheme coming into operation	Allowances to be at Committee's discretion.
(4) Blind wife of sighted man	£0. 12. 0.
(5) Blind husband with sighted wife..	£1. 16. 0.
(6) Single blind person living with parents and unfit for training or employment -	
Age 16-18 years	£0. 15. 0.
Age 18 years and over	£1. 0. 0.

The/

The following tables give the ages and state as regards marriage of those blind persons who are unemployable, including those in receipt of domiciliary assistance:-

Males.

Age and State of Unemployable.

(Excluding 8 Blind Asylum Pensioners and 11 Cases in Hospitals or Homes).

State.	16-39	40-49	50-69	70+	Total.	In receipt of Domiciliary Assistance	
						No.	Per cent
Married	1	3	21	11	36	28	78
Single or Widowed.	3	3	9	13	28	20	71
	4	6	30	24	64	48	75

Females.

Age and State of Unemployable.

(Excluding 4 Blind Asylum Pensioners and 12 Cases in Hospitals or Homes).

State.	16-39	40-49	50-69	70+	Total	In receipt of Domiciliary Assistance	
						No.	Per cent.
Married	8	2	9	3	22	10	45
Single or Widowed	8	3	36	32	79	49	62
	16	5	45	35	101	59	58

During the week ended 31st March, 1937, the weekly cost in respect of 107 domiciliary recipients, as detailed above, was £62. 7. 3. This expenditure may be regarded as normal, and the annual expenditure may be stated as being, approximately, £3,250.

As regards medical attendance, the Council appointed Dr. John H. Stephen to give medical attention to sick necessitous blind persons. This arrangement has worked most satisfactorily.

Arrangements have been made whereby medicines are supplied on special prescription forms, these forms being sent to the Central Checking Bureau for purposes of pricing.

Arrangements with Institutions.

In their arrangements with the Institutions, the Council has laid down the following conditions:-

(1) That the audited accounts of the Institutions shall be annually submitted to it.

(2) That the Institutions shall not undertake any new scheme or extend in any way their operations so as to affect the financial arrangements between the Council and the Institutions without first obtaining the consent of the Council.

(3) That the Institutions shall accept the procedure laid down in paragraph 11 of the Council's Approved Scheme under Section 2(1) of the Blind Persons Act, 1920, for the settlement of disputes, etc.

(4) That the Council is satisfied with the management of the Institutions.

MENTAL HEALTH SERVICES.

Kingseat Mental Hospital.

Under the provisions of the Local Government (Scotland) Act, 1929, the administration of the Kingseat Mental Hospital was transferred to the Public Health Committee of the Town Council.

On 31st December, 1936, there were on the Register 382 male and 305 female inmates - a total of 687 certified patients, being a decrease of 4 males and 5 females as compared with the corresponding figures for the previous year, viz., 386 males and 310 females. Of these 687 certified patients, 23 were Service patients, the cost of whose maintenance, as private patients, is met by the Ministry of Pensions.

Table XVIII shows the admissions, re-admissions, discharges and deaths of certified patients during the year ended 31st December, 1936. Information as to the admission, re-admission, discharges and deaths of certified patients from the date of the opening of the Hospital until the end of 1936 is given in Table XIX.

Admissions. A total of 102 patients was admitted under certificate - 46 males and 56 females. The following statement shows the types of mental disorder in the admissions of certified patients during the year.

Form of Mental Disorder.	Admissions.		
	Male.	Female.	Total.
Idiocy or Imbecility:			
(a) With Epilepsy	-	-	-
(b) Without Epilepsy	-	-	-
(c) Moral	-	-	-
Insanity occurring in later life:			
1. Epileptic Insanity	2	3	5
2. General Paralysis	4	0	4
3. Infect.Exhaustion Psychosis	3	8	11
4. Mania -			
(a) Simple	4	3	7
(b) Acute	6	6	12
(c) Chronic	-	1	1
5. Melancholia -			
(a) Simple	5	3	8
(b) Acute	5	6	11
(c) Chronic	-	1	1
6. Alternating Insanity	-	-	-
7. Paranoia	1	-	1
8. Dementia -			
(a) Praecox	6	7	13
(b) Senile	5	11	16
(c) Organic	1	2	3
(d) Alcoholic	-	-	-
9. Paraphrenia	4	5	9
	46	56	102

Seventeen/

Seventeen of these cases had at some previous date been inmates of this Hospital. In 21 cases heredity was a predisposing cause of the mental disorder. In 10 patients congenital mental deficiency was present, together with some form of associated psychosis. Alcohol was the causal factor of mental disorder in 7 patients, while syphilis was the causal factor in 4 cases. There were 5 epileptic cases.

Discharges. A total of 60 patients was discharged. Of these, 48 had recovered - 27 males and 21 females - giving a recovery rate, calculated on the number of admissions for the year, of 47 per cent. This is fractionally higher than the figure for the year 1932, which, up till that date, was the highest recovery rate recorded since the Hospital was opened. Twelve patients were discharged unrecovered, 6 of whom were relieved and 6 not improved.

Deaths. In all 51 certified patients died, giving a percentage of 7.1 on the average number resident during the year. This rate is practically similar to the average death-rate in Scottish Mental Hospitals during the past year.

The causes of the 51 deaths were as follows:-

Disease of the heart and blood vessels... ...	27
General Paralysis	5
Cerebral Haemorrhage	3
Cerebral Thrombosis	2
Pulmonary Tuberculosis	3
Acute Lobar Pneumonia	2
Acute Broncho-Pneumonia	2
Generalised Tuberculosis, Congenital Spastic Paraplegia, Pulmonary Embolism, Huntington's Chorea, Specific Aortitis, Cerebral Syphilis, Surgical Shock from Accidental Scalp Wound -- 1 each ...	7
	51

Voluntary Patients. At the end of 1936 there were 23 Voluntary Patients in residence - 2 more than in 1935. During the year, 12 Voluntary Patients were admitted, of whom 7 were discharged. Three Voluntary Patients died.

At the Preliminary Examination of the Royal-Medico Psychological Association for proficiency in mental nursing 8 nurses and 4 attendants passed, while 7 nurses and 2 attendants passed the Final Examination of this Association.

The statutory visits to Kingseat by His Majesty's Commissioners of the General Board of Control were made by Dr. Kate Fraser on 25th and 26th March, and by Dr. Aidan G.W. Thomson on 13th and 14th July.

A shop and tea-room erected in the Hospital grounds was opened in July, 1936, and the facilities thus provided have been appreciated both by patients and their relatives.

TABLE XVIII. - KINGSEAT MENTAL HOSPITAL.

Admissions, Re-Admissions, Discharges and Deaths of Certified Patients during the year ending 31st December, 1936.

	M.	F.	Total.	M.	F.	Total.
In the Hospital, 31st December, 1935	386	310	696			
Absent on Probation	-	-	-			
Absent on Pass	-	-	-			
Total on Register	...	...	...	386	310	696
Cases Admitted -						
First Admissions	38	47	85			
Not first Admissions	8	9	17			
Total cases admitted during the year	...	...	...	46	56	102
Total cases under care during the year	...	...	...	432	366	798
Cases Discharged -						
Recovered	27	21	48			
Relieved	2	4	6			
Not improved	4	2	6			
Died	17	34	51			
Total Cases discharged and died during the year	...	...	...	50	61	111
Remaining in the Hospital, 31st December, 1936	382	305	687			
Absent on Probation	-	-	-			
Absent on Pass	-	-	-			
Total on Register	...	...	...	382	305	687
Average daily number on Register during the year	...	...	...	384	310	694
[x]Persons admitted	...	...	...	46	56	102
Persons recovered	...	...	...	27	21	48
Transferred to other asylums	...	...	...	3	2	5
Transferred from other asylums	...	...	...	1	5	6

[x] Persons, i.e., separate persons, in contradistinction to cases, which may include the same individual more than once.

TABLE XIX. - KINGSEAT MENTAL HOSPITAL.

Admissions, Re-Admissions, Discharges and Deaths of Certified Patients From the opening of the Hospital, 16th May, 1904 to 31st December, 1936.

	M.	F.	Total	M.	F.	Total.
Persons admitted during period from 16th May, 1904 to 31st December, 1936	1754	1651	3405			
Re-Admissions	293	343	636			
Total Cases admitted ...	...	...	...	2047	1994	4041
Discharged Cases -						
Recovered	630	666	1296			
Relieved	227	200	427			
Not Improved	44	45	89			
Died	764	778	1542			
Total cases discharged and died since the opening of the Hospital	...	...	...	1665	1689	3354
Remaining on 31st December, 1936	...	...	...	382	305	687
Average number on register during the period.	...	...	...	287	270	557
Cases transferred from other asylums	...	...	...	343	337	680
Cases transferred to other asylums	...	...	...	100	81	181

OUTDOOR MEDICAL SERVICES.

Domiciliary medical services are provided for the statutory poor through five district medical officers, each of whom has a special district allocated to him.

The demand of the services of the district medical officers has certainly not been on the decline. The following table is interesting, showing as it does the number of sick poor treated during each quarter of the year. It will be observed that in the fourth quarter there is a very substantial increase. The number of individual visits and the number of consultations are greater in the fourth quarter than in any other quarter of the year.

CITY of ABERDEEN -- OUTDOOR MEDICAL RELIEF. Year 1936.

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
No. of Sick Poor attended during Quarter	862	868	730	1,189
No. of Visits	1,158	958	886	1,348
No. of Consultations	1,615	1,563	1,561	2,303

The number of consultations and visits made during the past three years is shown hereunder:-

	Visits.	Consultations.
1934	2,660	4,642
1935	4,730	6,521
1936	4,350	7,042

Consultations have shown a continued increase, but there was a slight decrease in the number of visits during 1936 as compared with that for the previous year.

PORT SANITARY SERVICES.

Trade and Shipping.

The following table gives the amount of shipping entering the Port during 1936, differentiated as between foreign and coastwise.

		Number of Vessels.	Tonnage of Vessels.
Foreign	Trading	359	292,478
	Fishing	1,023	77,086
Total Foreign		1,382	369,564
Coastwise	Trading	2,250	724,549
	Fishing	20,193	1,486,552
Total Coastwise		22,443	2,211,101
Total Foreign and Coastwise.		23,825	2,580,665

The total foreign and coastwise shipping entering the Port during the year was 23,825 vessels, of which 1,382 were foreign. The total tonnage of all vessels was 2,580,665, of which 369,564 was foreign.

Medical Inspection of Shipping.

Visits were paid to 18 ships on arrival from foreign ports to ascertain the condition of the health of the crew.

Three seamen - 1 suffering from measles, 1 from scarlet fever and 1 from tonsillitis - were admitted to the City (Fever) Hospital for treatment; the necessary disinfection was carried out in each case. Two of the men were employed on fishery cruisers and the remaining one on a coasting vessel.

Rat Destruction: Precautions against Plague and Infective Jaundice.

Trapping of rats within the area of the Harbour Commissioners is regularly carried out, and the rats are submitted to laboratory examination for plague and infective jaundice. In all, 20 rats were thus examined during 1936. Six rats showed the presence of L. icterohaemorrhagiae.

The following measure of work on rat destruction carried out by the two whole-time rat-catchers of the Health Department is submitted:-

Number of pieces of poison bait laid	147,668
Number of pieces of poison bait eaten... ...	31,751
Dry poison bait (mice) laid	201
Dry poison bait (mice) eaten	6

In addition, liquid poison in the form of Red Squill, was sold by the Health Department to occupiers of business premises and dwelling-houses within the City. The quantity sold amounted to fully 21 gallons, sufficient for the making up of 41,220 baits.

No ships arrived in Aberdeen from plague-infected ports.

Under the Public Health (Deratisation of Ships) Regulations (Scotland), 1929, 151 ships were inspected during the year, and 15 Deratisation Exemption Certificates were issued.

LABORATORY SERVICES.

The aim of the Department is to provide laboratory facilities for the prevention, diagnosis and treatment of disease.

At the end of 1935, all examinations in connection with venereal disease were transferred to the City Hospital laboratory. The majority of these examinations was formerly carried out at the Royal Infirmary.

The following statement gives in detail the number and results of examinations for the City of Aberdeen (including City Hospital and Woodend Hospital, during the year 1936.

	Positive.	Negative.	Total	Grand Total.
Diphtheria:				
Throat, nose and ear swabs	1,926	12,068	13,994	13,994
Tuberculosis:				
Sputum	798	1,764	2,562	
Pus	7	59	66	
Faeces	0	21	21	
Urines	6	100	106	
Cerebro-spinal fluids	7	56	63	
Pleural fluids	1	40	41	
Miscellaneous	0	2	2	2,861
Typhoid Fever:				
Blood cultures	8	86	94	
Widals	7	131	138	
Faeces	170	182	352	
Urines	49	191	240	
Miscellaneous	14	4	18	842
Paratyphoid Fever.				
Blood cultures	10	11	21	
Widals	15	428	443	
Faeces	60	75	135	
Urines	16	92	108	707
Bacillary Dysentery:				
Faeces	151	940	1,091	1,091
Food Poisoning:				
Blood agglutinations	5	0	5	
Blood cultures	1	2	3	
Faeces	8	5	13	
Urines	0	2	2	
Food stuffs	0	3	3	26
Puerperal Fever:				
Blood cultures	36	148	184	
Pus	151	18	169	353
Undulant Fever:				
Blood agglutinations	6	136	142	142
		Carry Forward:		20,016

L./

	Positive.	Negative.	Total.	Grand Total.
			Brought forward:	20,016
L. icterohaemorrhagiae:				
Blood agglutinations	26	44	70	
Urines	5	17	22	92
Venereal Diseases:				
Wassermann Reactions	1,429	4,146	5,575	
Kahn Tests	1,427	3,951	5,378	
Gonococcal Smears	717	3,258	3,975	
Spirochaetes	20	13	33	
Gonococcal complement fixation tests	4	30	34	14,995
Biochemical Examinations:				
Blood sugars			269	
Blood ureas			398	
Urine sugars			393	
Urine ureas			206	
Faeces for blood.			72	
Van den Bergh test			75	
Icteric Index.			81	
Blood cholesterol			3	
Test meals			75	
Urine for bile			1	
Blood calcium			11	
Miscellaneous			20	1,604
Chemical Examinations:				
Paint samples			3	
Whisky samples			1	4
Water and Milk Samples:				
Bacteriological examination of waters			270	
Swimming Bath waters			133	
Bacteriological examination of milks			80	483
General Examinations:				
Blood counts			776	
Differential cell counts			438	
Blood cultures (various)			427	
Faeces for organisms			10	
Faeces for protozoa			39	
Malaria	0	10	10	
Histological specimens			72	
Ophthalmia neonatorum	20	206	226	
Sputum for organisms			213	
Pus and fluids for organisms			875	
Throat, nose & ear swabs for organisms			1,892	
Eye swabs for organisms			96	
Teeth for organisms			2	
Cerebro-spinal fluids (not for tubercle bacilli)			256	
Urines for pathological exam.			3,344	
Urines for bacteriological exam.			456	
Vaccines			100	
Pleural/				
			Carry forward:	37,194

	Positive.	Negative.	Total.	Grand Total.
			Brought forward:	37,194
General (contd.)				
Pleural fluids (not for tubercle bacilli)			26	
Autopsies			24	
Blood grouping			44	
Foetus for spirochaetes			21	
Milks for phosphatase test			11	
Miscellaneous			31	9,389
Animal Inoculation:				
Guinea pigs inoculated with milk deposit for tubercle bacilli			182	
Guinea pigs inoculated with human material for tubercle bacilli			76	
Guinea pigs inoculated with human material for L. icterohaemorrhagiae			52	
Mice inoculated with human material			2	
Guinea pigs inoculated with material from throat or nose for diphtheria virulence test			54	
Mice inoculated with sputum for typing of pneumococci			248	614
				47,197

In addition to the above examinations for the City of Aberdeen, 26,632 examinations were carried out for the North-Eastern Counties within the Laboratory Services Scheme, including 17,505 for the County of Aberdeen. 26,632

Total number of examinations for 1936 ... 73,829

A summary of the laboratory examinations for the past three years for the City of Aberdeen, the County of Aberdeen and for all areas is appended herewith. In each instance the figures show a progressive increase.

	Aberdeen City.	Aberdeen County.	All Areas.
1934	37,856	8,247	54,787
1935	42,975	10,181	63,253
1936	47,197	17,505	73,829

Analyses under the Food & Drugs (Adulteration) Act.

In 1936, the number of samples analysed under the Food and Drugs (Adulteration) Act was 1,434, as compared with 1,266 in 1935.

VETERINARY SERVICES.

The activities of the Health Department that are subject for discussion under the above heading relate mainly to the control of food supplies at the four private slaughterhouses situated within the Burgh, and to the administration of the Diseases of Animals Acts and Orders and the inspection of dairies and cow sheds under the Milk and Dairies (Scotland) Act, 1914.

The bulk of the work under the Diseases of Animals Acts consists of the supervision of animals landing from Ireland. These have to be examined on arrival at the Marts in order to see that they are free from disease and that they are kept in the areas of the Marts specially set apart and licensed for the purpose. Licences have to be issued weekly for their movement when sold and those remaining unsold have to be detained in the Burgh in specially licensed buildings and fields until a specified time has elapsed. Weekly visits are made to these fields in order to see that the owners of the animals do not attempt to avoid keeping the animals the specified time. Frequent visits have also to be made to the railway sidings and lairages attached to boats carrying livestock. Visits are also made periodically to the licensed piggeries in the City in order to ensure that pig-keepers comply with orders relating to the boiling of food-stuffs.

MILK CONTROL.

Milk and Dairies (Scotland) Act, 1914.

No administrative difficulties in the operation of this Act were encountered during the year. There are twenty-two registered producing dairies within the City.

Inspection of Cows and Dairy Premises.

The average number of cows kept in dairy premises within the City boundary was 399. The premises were visited and the cows examined quarterly. The animals in all the dairies were in very good condition and well cared for. The hygienic conditions were very satisfactory and the premises were suitable and maintained in a satisfactory condition. All the new dairies continued to be satisfactory both with regard to the condition and class of cows kept and the sanitary condition of the premises.

Diseases dealt with on dairy inspection.

The diseases other than tuberculosis found when carrying out routine inspections of the dairy herds were as follows:-

Mastitis	11
Atrophy	13
Eruptions	4

The cows found to be suffering from mastitis and eruptions were removed temporarily from the herd. They were subsequently re-examined; if cured, they were returned to the herd, but if no cure had been effected, they were permanently removed from the herd.

Tuberculosis.

The following cases of tuberculosis were found:-

Tuberculosis of the Udder ...	4
Tuberculous Emaciation ...	2
Tuberculosis with chronic cough	1

These animals were removed from the herd and slaughtered under the Tuberculosis Order.

Twelve individual samples of milk were taken from cows suspected to be suffering from tuberculosis of the udder; four were found to be positive.

No action was necessary under Sections 13 and 14 of the Milk and Dairies (Scotland) Act, 1914.

No animal was tested with tuberculin.

Bulk Sampling for Bacteriological Examination.

The wholesale dairies were visited regularly during the year and bulk samples of milk were taken at the milk depots as the consignments arrived from the farms. Three-hundred-and-fifty-three samples were examined biologically and of these forty-four were found to be positive for the tubercle bacillus. This gives a percentage of 12.5 positive samples, which is a slight decrease from the previous year but may still be considered to be a heavy infection. Two hundred and sixty-eight of these samples were obtained from dairies in the County of Aberdeen and out of these twenty-seven or 10 per cent. were found to be positive. The remaining eighty-five samples were obtained from consignments from Kincardineshire and of these, seventeen, or 20 per cent. were positive.

The herds in Aberdeenshire from which these positive samples were obtained were visited, and, in most cases, the affected cow was found and slaughtered, and, where no affected cow could be detected, evidence was usually obtained that the cow which was most probably affected had been sold fat; in order to check the clinical examination a further bulk sample was taken. With regard to Kincardineshire, intimation was sent to the County Clerk who notified the Local Veterinary Inspector nominated to inspect the herds.

It will be evident from the results obtained that the bulk sampling of consignments of milk is an excellent supplement to the clinical examination of dairy herds and the practice is almost invaluable during the summer months when intensive clinical inspection is very difficult. Since the facilities for the biological examination of milk are now very satisfactory, it is intended that a greater number of samples will be taken.

Certified Milk.

No licences have been issued in the City of Aberdeen for the production of Certified or Grade A (T.T.) Milk. During the year, 14 firms of milk retailers had their licences to retail Certified Milk renewed.

Pasteurised Milk.

The Northern Co-operative Society,Limited were licensed to pasteurise milk in their premises at Berryden Road and to sell pasteurised milk in thirty-three branch shops belonging to the Society. A renewal licence was also granted to the Aberdeen and District Milk Agency, Limited, to pasteurise milk in their premises at Lilybank, Kittybrewster. Sixteen applications for renewal and three new applications were also received from other retailers. These applications were granted for one year, the applications being considered annually.

The pasteurising plants on both licensed premises were regularly inspected and samples of milk were taken fortnightly for bacteriological examination. No samples containing tubercle bacilli were found and the bacterial content was very satisfactory.

Inspection of Cattle in Markets.

The Auction Marts were inspected regularly each week and all the cows exposed for sale were examined. Since regular inspection has been carried out/

out, the type of cow sold in the markets in Aberdeen has, on the whole, been very satisfactory and any cows found to be unfit for transport are ordered to be slaughtered.

INSPECTION OF MEAT.

Fat Stock Markets.

Regular examination of cattle exposed at the various markets was carried out as formerly, particular attention being paid to fat cows. A number of these so-called fat cows were detained for local slaughter on account of injury and disease. The disease for which the animals were detained for local slaughter was chiefly tuberculosis and overgrown feet. No animals other than cows were detained for local slaughter.

Slaughterhouses.

There are four private slaughterhouses in operation within the Burgh; two of these belong to the Flesher Incorporation. As has been pointed out in previous Reports, it is extremely difficult to secure adequate inspection of meat in four widely separated slaughterhouses.

The number and class of animals killed in slaughterhouses during the year were as follows:-

Cattle.					Sheep.			
Oxen.	Heifers	Cows	Bulls	Calves	Sheep	Lambs	Pigs.	Other Animals.
35,832	32,966	265	84	96	127,937	3,465	6,095	-

The following table gives the number of carcases inspected and the weight of meat seized as unfit for human food in these slaughterhouses during the year:-

	Oxen	Bulls	Cows	Heifers	Calves	Sheep	Pigs
Number of carcases inspected	x	84	265	x	96	x	6,095
Number of carcases seized wholly -							
(1) For Tuberculosis...	77	2	84	103	1	-	20
(2) For other diseases.	11	2	53	4	2	35	15
Number of carcases of which portions were seized -							
(1) For Tuberculosis...	173	-	54	206	-	-	62
(2) For other diseases.	26	-	40	13	-	20	25
Total weight of meat seized	97,461 lbs.	3,640 lbs.	93,505 lbs.	112,458 lbs.	240 lbs.	1,734 lbs.	5,748 lbs.

x Accurate figures as to the number of oxen, heifer and sheep carcases inspected are not available. Every ox, heifer or sheep carcase showing evidence of disease is, of course, thoroughly examined, and all carcases of bulls, cows, calves and pigs are inspected.

Particulars are given in the following table regarding the carcases seized wholly for diseases other than tuberculosis:-

Disease	Oxen	Bulls	Cows	Heifers	Calves	Sheep	Pigs.
Actinomycosis ...	-	-	1	-	-	-	-
Neoplasms ...	-	1	2	-	-	-	-
Pyaemia ...	-	-	1	-	-	-	3
Abscesses ...	-	-	-	-	-	-	3
Erysipelas ...	-	-	-	-	-	-	4
Acute Mastitis ...	-	-	9	1	-	-	-
Septic Mastitis ...	-	-	3	-	-	-	-
Septic Metritis ...	-	-	17	-	-	-	-
Septic Peritonitis.	1	1	2	-	-	-	3
Septic Pericarditis	-	-	2	1	-	-	1
Dropsy ...	3	-	5	-	1	15	-
Uraemia ...	1	-	1	-	-	-	-
Jaundice ...	1	-	1	1	-	-	1
Acute Enteritis ...	3	-	-	-	-	-	-
Septic Pneumonia...	-	-	1	-	-	-	-
Septic Pleurisy ...	1	-	-	1	-	1	-
Emaciation ...	-	-	1	-	-	-	-
Decomposition ...	1	-	1	-	-	18	-
Extensive bruising.	-	-	3	-	-	1	-
Fevered or badly bled	-	-	3	-	-	-	-
Joint Ill ...	-	-	-	-	1	-	-
Total ...	11	2	53	4	2	35	15

Meat Marts.

In Aberdeen there are two large wholesale meat marts, to which carcases are consigned from County Districts. As a routine, all such carcases are inspected by the Meat Inspector in Aberdeen; the following table gives the number of carcases and the weight of meat seized as unfit for human food in these marts:-

	Oxen	Bulls	Cows	Heifers	Calves	Sheep	Pigs
Number of carcases seized wholly -							
(1) For Tuberculosis...	-	-	-	-	-	-	1
(2) For other diseases	5	-	5	2	2	49	10
Number of carcases of which portions were seized -							
(1) For Tuberculosis...	2	-	-	1	-	-	2
(2) For other diseases	20	1	15	5	-	5	36
Total weight of meat seized ...	5865 lbs.	56 lbs.	3709 lbs.	1451 lbs.	151 lbs.	2296 lbs.	1679 lbs.

Every seizure in the Meat Marts was made by the consent of the owner of the unfit food, with one exception, where legal proceedings had to be taken under Section 43 of the Public Health (Scotland) Act, 1897. The offenders were fined £7. 10/- and expenses.

Slaughter of Animals (Scotland) Act, 1928.

There was one prosecution under the above Order during 1936. Two persons were involved, and fines to the extent of £2 were imposed.

During the year, 92 licences were issued for the use of the mechanically operated instrument.

Diseases of Animals Acts.

The routine work necessary under the various Acts and Orders was duly carried out.

Control of Other Foods.

In addition to the control of milk and milk food products, and of meat, the Health Department continues an extensive supervision of other foods. Thus, the Fish Market is visited daily, and the quantity of fish destroyed as unfit for human food in 1936 was 8,008 lbs., as compared with 5,688 lbs. in 1935. The sale of fruit and vegetables, both wholesale and retail, is also under intensive supervision. So also, considerable attention continues to be paid to the inspection of tinned foods, and all factories where such articles are prepared are regularly visited. Provision-curing yards, wholesale warehouses and shops are also subjected to routine visitation.

CHAPTER IV.

ENVIRONMENTAL HYGIENE.

HOUSING CONDITIONS.

Temporary Dwellings in the Jute Buildings.

In December, 1934, the Medical Officer of Health was instructed by the Council to investigate the health of the occupants of the Jute Buildings and, in this connection, a Report was submitted dealing with the history of the Jute Buildings, the number of occupants and their physical condition.

In that Memorandum, I made the following recommendations:-

> "It should be remembered that these houses in the Jute Buildings were never intended to be used as ordinary or permanent dwellings. They constitute merely a "clearing-house", and, as such, serve a very useful purpose. For medical reasons, it is not advised that these people should reside in their present houses for an indefinite period, and, when other houses are available, these should be offered to those tenants in whose families there exist such diseases as tuberculosis and rheumatism, and special consideration might also be given to those who have maintained a reasonably high standard of cleanliness.
>
> "From investigations made, I am of opinion that catarrhal colds are more prevalent amongst the inhabitants of the Jute Buildings than in the general population and it is also medically likely that the convalescence of children so affected is retarded. At the same time, I wish definitely to state that the houses in the Jute Buildings cannot be classified as uninhabitable and that the conditions under which the majority of the tenants is now living - especially the tent and caravan dwellers - are immeasurably superior to those under which they previously lived.
>
> "It is not by any means claimed that the conditions existing in the Jute Buildings are ideal. Take, for example, the question of ventilation. The best available means of ventilation have been provided, but these are not ideal. Since the complaint was originally lodged, an attempt at cross ventilation of the main building has been effected by forming ventilators on the roof, and the caretaker has been instructed to open these periodically.
>
> " One cannot ignore the fact that there may be an economic factor in a proportion of the complaints. Some of the tenants say quite candidly that, whereas they are paying 5/3 per week for their two rooms, it is possible for certain other rate-payers to get a well-built, substantial new three-roomed house at 5/- per week or less.
>
> "An inquiry of this kind must necessarily be fragmentary, because I am not in possession of the physical conditions of all the members of all the families in the Jute Buildings before they took up tenancy there. From the purely medical point of view, it is therefore recommended that the first tenants to obtain new houses should be those already mentioned, namely, pregnancy cases, tuberculous families, families where there is distinct evidence of rheumatism, and tenants who have shown themselves to be capable of keeping their homes in a hygienic condition."

In September, 1936, a petition was sent to the Department of Health for Scotland complaining that the Jute Buildings were unfit for human habitation. I was again asked to report on the conditions pertaining at the Jute Buildings, and stated that I had nothing to add to my original Memorandum.

The Jute Buildings were inspected by Mr. Wilson, Chief Architect of The Department of Health, and Dr. E. Watt, one of the Department's Medical Officers.

The Department of Health, acting on their findings, recommended the Council to remove to more suitable accommodation such families as were referred to in the last paragraph of my Memorandum.

1. Overcrowding.

In terms of the Housing (Scotland) Act, 1935, the Sanitary Inspector carried out a survey of dwelling-houses with a rateable value of £45 and under, in order to ascertain the degree of overcrowding, if any, according to the standards laid down by the Act. This survey was completed in February, 1936, and revealed the fact that 10,915 families were living under overcrowded conditions. From that date to the end of the year, 120 additional cases were brought to light.

Overcrowding was remedied in 480 families by their transference to houses belonging to the Local Authority, whilst overcrowding in a small number of families has been known to be remedied by their transference to privately-owned houses.

2. Number of Houses built by Private Enterprise.

The scheme for assistance to private enterprise terminated on 31st March, 1934. In 1936, 721 houses were erected as against 538 in 1935 and 416 in 1934.

3. Number of Houses erected by the Local Authority.

During the year, a total of 614 new houses, under the Housing Schemes, was completed, and at 31st December, 1936, there were 622 houses in course of erection, including 566 in Woodside and St. Machar Wards.

The total number of houses completed in the City since 1919 under the Corporation Housing Schemes, was 4,488. This included 1,500 houses erected in connection with the Improvement Scheme.

The room capacity of the 4,488 additional houses is as follows:-

3 houses contain 5 rooms.
442 " " 4 "
3003 " " 3 "
1040 " " 2 "

4. Tents and Vans. Of the camping grounds situated throughout the City, the conditions at Haudagain, Canal Road and Great Northern Road cannot be said to be satisfactory. There is no doubt that the solution of the tent and van problem would be the establishment of a permanent municipal camping ground where a good water supply would be laid on and proper sewage disposal arranged for. Such a camping ground would, of necessity, have to be controlled by the Local Authority and supervised by an employee of the Authority.

FACTORIES, WORKSHOPS and WORKPLACES.

Factories - Table XX is submitted giving details of the administration of the Factory and Workshop Act, 1901. No prosecutions had to be instituted under the Act, but a large number of defects discovered during the routine inspections was remedied.

Workshops. The number of workshops, exclusive of bakehouses, registered at the end of 1936 was 677, as compared with 684 in 1935. Every workshop is inspected by the Sanitary Staff at least once a year, and an effort is made to keep it in accordance with the requirements of the Public Health Act and the Factory and Workshops Acts. Fish-curing and provision-curing works are inspected very frequently, some of them almost daily, the primary object of the visit being the inspection of food. The majority of the defects found during 1936 had reference to lack of cleanliness.

TABLE XX. - ABERDEEN - FACTORIES, WORKSHOPS AND WORKPLACES, 1936.

1. - Inspection of Factories, Workshops and Workplaces.

Including Inspections made by Sanitary Inspectors.

	Number of		
	Inspections	Written Notices	Prosecutions.
Factories (including Factory Laundries)	1,071	120	-
Workshops (including Workshop Laundries)	1,533	199	-
Workplaces (other than Outworkers' premises)	37	18	-
Total	2,641	337.	-

2. - Defects found in Factories, Workshops and Workplaces.

Particulars.	Number of Defects			Number of Prosecutions
	Found	Remedied	Referred to H.M. Inspector	
Nuisances under the Public Health Acts*				
Want of Cleanliness	272	266	-	-
Want of Ventilation	1	1	-	-
Overcrowding	-	-	-	-
Want of drainage of floors.. ...	2	2	-	-
Other nuisances	39	35	-	-
Sanitary Accomm. (Insufficient..	-	-	-	-
Sanitary Accomm. (Unsuitable or defective	23	23	-	-
Sanitary Accomm. (Not separate for sexes	-	-	-	-
Offences under the Factory & Workshop Acts				
Illegal occupation of underground bakehouses (s.101)	-	-	-	-
Other offences ... ... (excluding offences relating to outwork and offences under the Sections mentioned in the Schedule to the Dept. of Health (Factories & Workshops Transfer of Powers) Order, 1921).	-	-	-	-
Total	337	327	-	-

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* Including those specified in Sections 2, 3, 7 and 8 of the Factory & Workshop Act, 1901, as remediable under the Public Health Acts.

Bakehouses - The bakehouses, of which there were 79 in the City in 1936, as against 75 in the preceding year, were, as usual, inspected every quarter, or oftener, and were found, on the whole, to be in a satisfactory condition. Certain sanitary defects in connection with bakehouses were remedied at the suggestion of the Health Department.

Home Workers. With regard to home workers, the usual routine inspections were made in connection with the sanitary condition of the premises and the prevention of infectious diseases.

Slaughterhouses. At the end of 1936, there were 4 licensed slaughterhouses within the City.

Other Offensive Trades. The offensive trades in Aberdeen, within the meaning of the Public Health (Scotland) Act, 1897, are concerned chiefly with tallow-melting or oil extracting from ox bones or fish livers, soap boiling, knackering, hide factoring, and the manufacture of manures and fish meal. At the end of the year, 22 firms were carrying on one or more offensive trade, and the total number of trades so conducted was 36.

New Applications for Establishment of Offensive Trades. No new applications for the establishment of offensive trades were received during the year, but two applications for sanction to extend premises were dealt with. Both applications related to the business of manufacturer of fish meal.

One application was lodged by the Caledonian Milling Company (Aberdeen) Limited, for enlargement of their premises in Palmerston Road. The Council refused the application and an Appeal was made to the Department of Health. After full enquiry, sanction was granted by the Department of Health in January, 1937, to the enlargement of the premises, subject to certain conditions.

The other application was lodged by Messrs. John Miller & Company(Aberdeen) Limited, and referred to the enlargement of their premises at Sandilands. Sanction was given by the Town Council on 15th February, 1937.

Number of Inspections made and manner and conduct of business. Excluding visits to slaughterhouses, the number of visits to premises in which offensive trades are being carried on was 2,223.

In 1935, complaints were received concerning offensive smells from the Hardgate Knackery, and, on instructions from the Department of Health for Scotland, a Report was prepared by the Medical Officer of Health and the Sanitary Inspector.

During 1936, seven complaints were received in connection with this knackery. The Department of Health for Scotland informed the Town Council that the Local Authority should again carefully consider the question of making bye-laws for regulating the businesses of knackering, bone-boiling, tallow melting, etc., and such bye-laws have been under consideration by the appropriate Committee.

Particulars regarding smells from other offensive trades are given in the Sanitary Inspector's Annual Report.

ATMOSPHERIC CONDITIONS.

In Table XXI is summarised the state of the weather in Aberdeen for each month throughout the year under review. This information is obtained from King's College Observatory.

As regards sunshine, June 1936 was the brightest month on record. There were 274 hours of bright sunshine during the month, or 9 hours a day. June 21 was the best day of the year when there there 15.7 hours of brilliant sunshine during the seventeen-and-a-half hours of daylight. The total amount of sunshine during the year under review was 1,466 hours, as against 1,303 hours in 1935.

The highest temperature of the year was 73.4° F. as recorded on 4th and 5th July, and the lowest was 15.1° F. on 20th January. The temperature/

TABLE XXI. - ABERDEEN - METEOROLOGICAL RECORD FOR EACH MONTH (From King's College Observatory)

YEAR 1936.																							
MONTH.	BAROMETRIC PRESSURE, (at 32°F. and Sea Level)			TEMPERATURE OF ATMOSPHERE.				Mean Daily Temp. of Ground (4 ft. below surface)	Relative Humidity Sat = 100	RAINFALL.		SUNSHINE.		WIND.									
														Direction; and duration in Hours.									Velocity.
	Absolute Highest	Absolute Lowest	Mean Daily Range	Absolute Highest	Absolute Lowest	Mean Daily Temp.	Mean Daily Range			Duration.	Amount.	Duration.	Percent. of possible sunshine	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm	Average No. miles per day
	Inches	Inches	Inches	°F.	°F.	°F.	°F.	°F.	%	Hrs.	Inches	Hrs.											
January	30.32	28.31	0.29	48.9	15.1	36.5	8.1	38.6	85	149	4.5	53	23	40	15	45	88	60	117	169	205	5	196
February	30.39	28.83	0.25	47.3	17.2	36.7	7.8	37.0	82	90	1.9	63	23	31	14	67	66	229	126	27	123	13	215
March	30.29	29.28	0.16	57.4	28.8	41.5	7.8	38.8	83	88	1.6	62	17	87	14	72	147	146	162	67	48	1	165
April	30.38	29.59	0.15	59.5	27.7	41.9	11.3	42.2	72	49	0.7	178	42	176	30	26	39	96	46	72	231	4	206
May	30.45	29.69	0.14	60.1	37.4	47.8	9.3	46.1	81	70	1.2	201	39	156	83	114	89	126	17	18	111	30	153
June	30.34	29.53	0.15	72.5	34.9	53.9	12.8	50.3	76	42	0.8	274	52	86	40	99	68	181	44	32	129	41	113
July	30.14	29.23	0.16	73.4	45.9	58.4	10.0	54.8	81	123	4.7	138	26	47	16	65	120	132	61	93	159	51	151
August	30.45	29.22	0.13	71.4	43.2	58.4	12.9	55.8	78	54	1.4	177	38	25	8	43	50	229	116	88	171	14	153
September	30.55	29.03	0.20	66.7	38.1	54.4	8.0	55.9	88	106	2.6	95	25	80	56	41	74	185	41	52	159	32	143
October	30.36	28.40	0.26	64.9	34.2	47.4	11.3	51.9	78	77	1.2	112	35	37	19	9	11	103	128	200	227	10	197
November	30.47	28.56	0.25	55.4	26.4	41.6	10.3	46.1	82	77	1.4	62	26	25	6	18	25	128	133	137	242	6	155
December	30.52	28.47	0.35	53.6	27.5	40.9	9.1	41.4	79	90	2.0	51	25	5	0	0	2	233	272	133	98	1	256
Monthly Average	30.39	29.01	0.21	60.9	31.4	46.6	9.9	46.6	80	85	2.0	122	31	66	25	50	65	154	105	91	159	17	175
Total for Year.	...	...	...	...	...	...	...	...	...	1015	24.0	1466	...	795	301	599	779	1848	1263	1088	1903	208	...

temperature was above normal in March, June, July, August and September, while December also proved milder than usual. The mean temperature for the whole year was 46.6° F. as against 46.9° F. in 1935.

April and June were the driest months with a rainfall of 0.7 inches and 0.8 inches respectively. In January, there were 4.5 inches of rainfall and in July, which had the year's heaviest fall, there were 4.7 inches. Even although July had a heavy rainfall record, the month was not as bad as figures would lead one to believe. For example, on 11th July, in approximately two hours, 0.85 of an inch fell, and five days later, another torrential downpour gave 0.39 of an inch in quarter of an hour. Although statistically July was a rainy month, nevertheless it had 138 hours of bright sunshine. The longest continuous duration of rainfall occurred on 9th March, when for a period of over 22 hours, rain fell steadily. The total amount of rainfall for the year under review was much below the average for preceding years.

In 1936, the most prevalent winds in Aberdeen were from the north-west and south. The least prevalent winds were north-easterly winds.

WATER SUPPLY.

The following Table (Table XXII) measuring in percentages the degree of purity of the water in terms of bacillus coli, provides evidence of the present state of the water as compared with the previous year.

TABLE XXII. - ABERDEEN - QUALITY OF WATER - TYPICAL BACILLUS COLI.

ear.	Samples from -	Absent in 100 c.c. %	Present in 100 c.c. %	Present in 50 c.c. %	Present in 20 c.c. %	Present in 10 c.c. %	Present in 5 c.c. %	Present in 1 c.c.& less. %
936.	Cairnton Intake - River Water at Intake	...	...	...	...	4	27	69
	Aberdeen Tap Water	58	29	9	2	2	...	...
935.	River Water at Intake	...	...	...	...	6	35	59
	Aberdeen Tap Water	75	25	...	...	...	...	...
berdeen Tap Water 1907, .e. before filtration.		...	...	13	...	29	33	25

CHAPTER V.

STATISTICAL COMMENTARY.

POPULATION.

The population of the City with the extension of the City boundaries has been estimated by the Registrar-General to the middle of the year as 176,897.

The accompanying table gives the percentage and number of population at each of the principal age-periods.

TABLE XXIII. - ABERDEEN - POPULATION AT VARIOUS AGE-PERIODS - 1936.
(As estimated from Proportions at Census of 1931)

		Under 1 yr.	1 and under 5 yrs.	5 and under 15 yrs.	15 and under 25 yrs.	25 and under 45 yrs.	45 and under 65 yrs.	65 yrs. and upwards.	All ages.
Percentage of Population at each age (according to Census)	1921	2.35	6.66	19.41	20.00	27.00	18.42	6.16	...
	1931	1.75	6.81	17.22	18.65	28.51	19.81	7.25	...
Estimated Population at each age-period in	1936	3,096	12,047	30,462	32,991	50,433	35,043	12,825	176,897

BIRTHS. (Table XXIV)

The total number of births during the year 1936, corrected for transfers, was 3,048 (2,854 legitimate and 194 illegitimate), equivalent to a rate of 17.2 per 1,000 of the population, as against a rate of 18.0 per 1,000 in 1935. The average rate for the 1931-35 quinquennium was 18.2.

Proportion of Males to Females: The number of male infants to every 100 female infants, corrected for transfers, during 1936 was 98, as compared with 108 for 1935.

Illegitimate Births: In 1936, the number of illegitimate births after correction for transfers, was 194, and amounted to 6.4 per cent. of the total births. The average rate for the 1931-35 quinquennium was 7.1.

Still-Births: In 1936, the number of still-births was 179 , and amounted to 55 per 1,000 registered births. In 1935 the rate was 46.

MARRIAGES. (Table XXIV)

During the year 1936, there were 1,723 marriages within the City, equivalent to a rate of 9.7 per 1,000 of the population as against 10.0 in 1935. The average rate for the 1931-35 quinquennium was 9.2

Residence: In 1936, 1,230 of the males married were ordinarily resident in Aberdeen, the remaining 493 coming from outwith the City. As regards the females, 1,328 were ordinarily resident within the City, and 395 lived outside the City.

Status: Of the 1,723 marriages in 1936, the persons married included 58 widows and 113 widowers.

DEATHS./

DEATHS (Table XXIV)

The total number of deaths during 1936, corrected for transfers, was,2,240, equivalent to a death-rate of 12.7 per 1,000 of the population. For the quinquennium 1931-35, the average annual number of deaths was 2,284 with a death-rate of 13.3.

The Average Age at Death: Of all persons dying during 1936, the average age at death was 54.6 years. In the preceding quinquennium, it was 52.1 years.

Excess of Birth-rate over Death-rate: In Table XXIV will be found a column giving the excess of the birth-rate over the death-rate since the commencement of registration. The excess in 1936 was 4.5. For the quinquennium 1931-35, the excess was 4.9. The usual excess of birth-rate over death-rate for many years prior to 1911 was about 11 to 14.

ANALYSIS OF THE DEATH-RATE.

Mortality in Relation to Age and Causes (Tables XII., XXV. & XXVI)

Mortality at Pre-School Age-Period. This is dealt with in detail in the section of this Report relating to Maternity and Child Welfare Services.

Mortality at School Age-Period. (5-15 years): The deaths at this age-period amounted to 42 or 1.4 per 1,000 of population at this age, as against 2.2 in 1935 and 1.8 in the preceding quinquennium. The epidemic diseases showed a decrease in 1936 as compared with 1935.

Mortality at Adolescent Age-Period (15 to 25 years): The deaths at this age-period were 61 or 1.8 per 1,000 of the population, as against an average rate of 2.1 in the preceding five years.

Mortality at Early-Mature Age-Period (25 to 45 years): The number of deaths at this age-period was 217, giving a rate of 4.3 per 1,000 of the population. The rate for the preceding quinquennium was 4.5.

Mortality at Late-Mature Age-Period (45 to 65 years): The deaths amounted to 543, with a rate of 15.5 per 1,000 of the population at this period, and equivalent to the average rate for the preceding quinquennium.

Mortality at Post-Mature Age-Period (65 years and upwards): The deaths amounted to 1,086, with an equivalent rate of 84.7 per 1,000 of the population, as compared with an average rate of 84.5 for the 1931-35 quinquennium.

Mortality at All Ages: The death-rate from all causes has already been referred to.

The percentage fall in the death-rate from the decade of 1861-70 up to the end of 1936 is for each age-period as follows - 72 for the pre-school (including the infant) period; 82 for the school period; 81 for the adolescent period; 67 for the early-mature period; 34 for the late-mature period; and 11 for the post-mature period.

During 1936, the diseases responsible for the largest number of deaths were as follows:- Diseases of the circulatory system, 586 deaths; Diseases of the nervous system, 302 (including 241 due to cerebral haemorrhage); malignant diseases, 275; respiratory diseases, 254.

VARIATIONS IN MORTALITY FROM SELECTED CAUSES SINCE 1856.

The variations in the mortality from selected causes at all ages since/

since the year 1856 - the second year of civil registration - can be conveniently followed in Table I (p. 16).

Infectious Diseases: These, excluding Tuberculosis, are dealt with in greater detail in the part of the Report devoted specially to Infectious Diseases.

Cancer and other Malignant Diseases: The cancer death-rate was 155 per 100,000 of the population in 1936, as compared with a rate of 168 in 1935. During the 1931-35 quinquennium, the average rate was 159.

Pneumonia: The death-rate from pneumonia was 76 per 100,000 of the population, as against an average of 102 during the 1931-35 quinquennium.

Bronchitis gave a death-rate of 51 per 100,000 of the population, as compared with an average of 60 for the preceding quinquennium.

Diseases of the Digestive System: In 1936, the death-rate was 68 per 100,000, as against an average of 70 in the 1931-35 quinquennium.

Diseases of the Circulatory System: The death-rate from these diseases was 331 per 100,000, as compared with an average of 276 for the preceding quinquennium.

TABLE XXIV. - ABERDEEN - MARRIAGE, BIRTH AND DEATH RATES - 1856-1936.
(Per 1,000 of Population).

ear.	Population.	Marriages		Births[x̄]			Deaths[x]			Excess of Birth-rate over Death-rate.
		Number	Rate per 1,000 of Population.	Number	Rate per 1,000 of Population.	Illegit. Births per 100 Total Births	Number	Rate per 1,000 of Population.	Average Age at Death.	
1936	176,897	1,723	9.7	3,048	17.2	6.4	2,240	12.7	54.6	4.5
1935	175,373	1,755	10.0	3,157	18.0	6.4	2,375	13.5	51.8	4.5
1934	173,215	1,683	9.7	3,071	17.7	7.0	2,165	12.5	52.5	5.2
1933	172,036	1,524	8.9	3,019	17.6	6.3	2,240	13.0	52.1	4.6
1932	170,562	1,467	8.6	3,188	18.7	8.0	2,293	13.4	51.2	5.3
1931	168,608	1,519	9.0	3,231	19.2	7.8	2,346	13.9	53.0	5.3
an of 31-35	171,959	1,590	9.2	3,133	18.2	7.1	2,284	13.3	52.1	4.9
1930	167,718	1,557	9.3	3,303	19.7	8.7	2,083	12.4	50.0	7.3
1929	166,833	1,558	9.3	3,112	18.7	9.0	2,422	14.5	50.3	4.2
1928	165,952	1,531	9.2	3,314	19.9	8.8	2,237	13.5	48.2	6.4
1927	165,075	1,502	9.1	3,182	19.3	7.5	2,180	13.2	49.1	6.1
1926	164,204	1,403	8.5	3,406	20.7	7.0	2,115	12.9	48.0	7.8
an of 26-30	165,956	1,510	9.1	3,263	19.7	8.2	2,207	13.3	49.1	6.4
21-25	161,622	1,582	9.8	3,763	23.3	8.2	2,303	14.3	44.4	9.0
16-20	161,568	1,754	10.9	3,479	21.5	10.6	2,439	15.1	41.7	6.5
11-15	164,324	1,489	9.1	3,959	24.1	10.2	2,752	16.8	38.1	7.4
06-10	163,620	1,360	8.3	4,505	27.5	9.7	2,512	15.4	37.6	12.2
01-05	158,082	1,428	9.0	4,872	30.8	8.5	2,763	17.5	34.9	13.3
96-1900	145,740	1,356	9.3	4,636	31.8	8.3	2,644	18.1	33.3	13.7
91-95	131,627	1,099	8.4	4,114	31.3	9.8	2,539	19.3	32.9	12.0
86-90	117,587	911	7.8	3,827	32.5	10.4	2,370	20.2	...	12.3
81-85	108,959	848	7.8	3,712	34.1	10.6	2,159	19.8	...	14.3
76-80	100,419	788	7.9	3,480	34.7	10.9	2,100	20.9	...	13.8
71-75	91,941	705	7.7	3,169	34.5	12.1	2,063	22.4	...	12.1
66-70	84,234	684	8.1	3,010	35.7	12.9	1,978	23.5	...	12.2
61-65	77,040	624	8.1	2,663	34.6	...	1,915	24.9	...	9.7
56-60	73,458	524	7.1	2,397	32.6	...	1,772	24.1	...	8.5

[x̄] Corrected for transferred births for 1911 and subsequent years.

[x] Corrected for transferred deaths for 1904 and subsequent years.

TABLE XXV. - ABERDEEN - MORTALITY FROM ALL CAUSES AT VARIOUS AGE-PERIODS[x]
(per 1,000 of population at each age).

Year.	Infantile Mortality	Age Period.						All Ages.
	Deaths of Infants under 1 year per 1,000 Births.	0-5 years	5-15 years	15-25 years	25-45 years	45-65 years	65 years and upwards	
1936	70	19.2	1.4	1.8	4.3	15.5	84.7	12.7
1935	91	26.9	2.2	1.9	4.1	15.4	86.5	13.5
1934	77	21.3	2.1	2.0	4.1	15.0	80.4	12.5
1933	79	22.5	1.6	2.3	4.9	15.4	82.1	13.0
1932	93	27.0	1.5	1.8	4.9	16.1	81.6	13.4
1931	90	25.0	1.5	2.7	4.4	15.6	92.0	13.9
an of 31-35	86	24.5	1.8	2.1	4.5	15.5	84.5	13.3
1930	80	24.2	2.0	1.9	4.1	15.4	76.0	12.4
1929	95	28.4	1.8	2.9	4.6	16.7	94.0	14.5
1928	94	31.5	1.8	2.4	4.8	15.0	82.2	13.5
1927	105	30.2	1.9	1.7	4.1	15.7	83.7	13.2
1926	96	30.0	2.2	2.4	4.3	14.8	79.8	12.9
an of 26-30	94	28.9	1.9	2.3	4.4	15.5	83.1	13.3
21-25	115	42.2	1.8	2.8	5.3	15.5	82.3	14.2
16-20	127	41.0	2.9	4.0	6.8	17.4	82.8	15.1
11-15	143	49.7	4.0	4.1	6.7	20.0	86.5	16.8
06-10	128	42.5	2.9	3.5	7.0	19.5	84.2	15.4
01-05	143	52.2	3.1	4.6	7.4	21.3	83.3	17.1
96-1900	144	54.2	3.4	5.0	9.2	22.2	81.6	18.1
91-95	147	57.5	4.5	5.8	9.3	22.7	86.5	19.3
86-90	140	52.9	4.8	7.0	10.5	22.9	88.1	20.2
81-85	126	50.9	5.4	6.4	10.1	23.8	86.3	19.8
76-1880	129	53.1	6.2	7.7	11.3	22.1	86.6	20.9
71-75	133	57.5	7.7	8.2	12.0	22.6	91.5	22.4
66-70	133	68.0	7.2	8.9	12.4	22.2	91.2	23.5
61-65	130	68.9	8.1	10.5	13.4	24.7	98.7	24.9
56-60	126	67.8	9.3	9.8	12.6	21.8	97.5	24.1

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[x] Corrected for transferred deaths in 1904 and subsequent years.

TABLE XXVI. - ABERDEEN - MORTALITY AT VARIOUS AGE-PERIODS FROM VARIOUS CAUSES

(Corrected for Transferred Deaths)

Age.	All Causes.	Infectious & Parasitic Dis. (excl. Tuber.).		Tuberculous Diseases.		Respiratory Diseases.			Diseases of Circulatory System.	Diseases of Gen.-Urinary System.	Nervous Diseases.			Dis. of Digestive Sys. inc. Diarrhoea.	Malignant Diseases.	Developmental Dis. (exc. old age).	Accident and Violence.	Debility, Atrophy, Inanition.		Miscellaneous.
		Epidemic.	Other Infect.	Phthisis.	Other Tuberculous.	Pneumonia.	Bronchitis.	Other Respiratory.			Cerebral Haem. etc.	Convulsions	Other Nervous.					Under Age of 1 year.	Above Age of 65 yrs.	
						A. - Number of Deaths - Year 1936.														
Under 1 year	214	26	0	0	1	31	6	3	0	1	0	14	5	17	0	89	1	16	-	4
1-5 years	77	23	0	0	4	23	2	1	0	1	0	0	3	5	0	2	9	-	-	4
5-15 "	42	8	1	1	2	2	0	0	2	1	0	0	4	5	1	0	7	-	-	8
15-25 "	61	3	0	7	5	4	1	1	3	3	0	0	2	10	1	0	16	-	-	5
25-45 "	217	6	6	32	3	17	3	5	32	11	4	0	11	18	21	0	18	-	-	30
45-65 "	543	11	10	25	1	31	15	3	127	26	66	0	17	33	111	0	31	-	-	36
65 + "	1086	5	1	6	0	27	64	15	422	53	171	0	5	33	141	0	34	-	51	58
All Ages.	2240	82	18	71	16	135	91	28	586	96	241	14	47	121	275	91	116	16	51	145
1936.						B. - Death-Rate per 100,000														
All Ages.	1266	46	10	40	9	76	51	16	331	54	136	8	27	68	155	51	66	..	..	82
Average 1931-1935. All Ages.	1328	61	11	52	17	102	60	19	276	60	174	6	29	70	159	50	61	..	..	69